

JUPITER-80**SERVICE NOTES**
*Issued by RJA***Table of Contents**

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Cautionary Notes

Before beginning the procedure, please read through this document. The matters described may differ according to the model.

Back Up User Data!

User data may be lost during the course of the procedure. Refer to “**Data Backup and Restore Operations**” (p. 40) in the Service Notes and save the data. After completing the procedure, restore the backed-up data to the product.

Part Replacement

When replacing components near the power-supply circuit or a heat-generating circuit (such as a circuit provided with a heat sink or including a cement resistor), carry out the procedure according to the instructions with respect to the part number, direction, and attachment position (mounting so as to leave an air gap between the component and the circuit board, etc.).

Parts List

A component whose part code is ***** will not be supplied as a service part because one of the following reasons applies.

- Because it is supplied as an assembled part (under a different part code).
- Because a number of circuit boards are grouped together and supplied as a single circuit board (under a different part code).
- Because supply is prohibited due to copyright restrictions.
- Because reissuance is restricted.
- Because the part is made to order (at current market price).
- Because it is carried in electronic data on the Roland web site.
- Because it is a package or an accessory irrelevant to the function maintenance of the main body.
- Because it can be replaced with an article on the market. (battery or etc.)

Circuit Diagram

In the circuit diagram, “NIU” is an abbreviation for “Not in Use,” and “UnPop” is an abbreviation for “Unpopulated.” They both mean non-mounted components. The circuit board and circuit board diagram show silk-screened indications, but no components are mounted.

Specifications

JUPITER-80: Synthesizer

Keyboard

76 keys (with velocity and channel aftertouch)

Sound Generator Section

Maximum Polyphony

256 voices (varies according to the sound generator load)

Parts

4 parts (Upper, Lower, Solo, Percussion)

Registrations

256 (including pre-loaded registrations)

Live Sets

2,560 (including pre-loaded registrations)

Effects

for Live Set (Upper/Lower part)

- Multi-Effects (MFX): 4 units (parallel connection only),
76 types per each Upper/Lower (total: 8 units)
- Reverb: 1 unit, 5 types per each Upper/Lower (total: 2 units)

for Solo part/Percussion part

- Compressor + Equalizer + Delay: 1 set per each
Solo/Percussion (total: 2 sets)
- Reverb: 1 unit, 5 types

Master Effects

- 4-Band Equalizer: 1 unit

USB Memory Song Player/ Recorder Section

Tracks

1 stereo track

Playable File Format

Audio File: WAV, AIFF, MP3

Recording File Format

Audio File: WAV (44.1 kHz, 16-bit Linear, stereo)

Effects

4-Band Equalizer: 1 unit

External Memory

USB Flash Memory (sold separately)

Others

Arpeggiator

Preset: 128 styles
User: 128 styles

Harmony Intelligence

17 types

Controllers

D Beam Controller
Pitch Bend/Modulation Lever
Assignable buttons ([S1], [S2])
Assignable knobs ([E1]–[E4])
PART LEVEL sliders (PERC, LOWER, UPPER, SOLO)

Options (sold separately)

Keyboard stand: KS-18Z, KS-G8 (Use a stand that causes the height of the unit to be one meter or lower.)
Pedal switch: DP series
Footswitch: BOSS FS-5U
Expression pedal: EV-5
Stereo Headphones
USB Flash Memory

* Printed matters will not be supplied after the end of the production. Then, download the electronic file from the Roland web site.

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Display

Graphic Color LCD 800 x 480 dots (touch screen)

Connectors

PHONES jack (stereo 1/4-inch phone type)
MAIN OUT jacks (L, R) (XLR type)
MAIN OUT jacks (L/MONO, R) (1/4-inch TRS phone type)
SUB OUT jacks (L, R) (1/4-inch phone type)
AUDIO IN jack (Stereo miniature phone type)
DIGITAL AUDIO OUT jack (COAXIAL)
FOOT PEDAL jacks (CTRL 1, CTRL 2, HOLD)
MIDI Connectors (IN, OUT, THRU)
USB COMPUTER port (Audio/MIDI)
USB Memory port
AC IN jack

Power Consumption

25 W

Dimensions

1,230.9 (W) x 439.3 (D) x 139.6 (H) mm
48-1/2 (W) x 17-5/16 (D) x 5-1/2 (H) inches

Weight

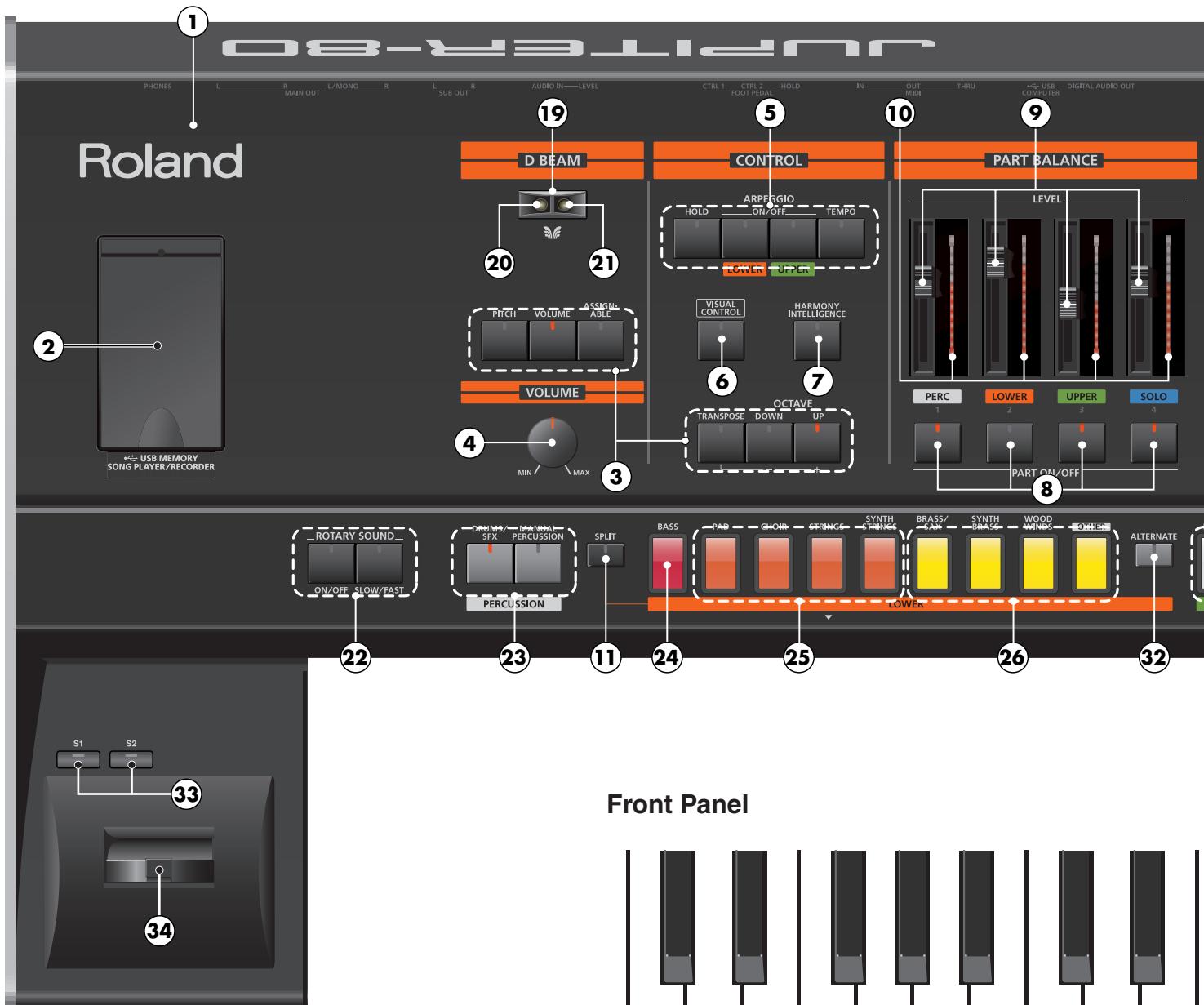
17.7 kg / 39 lbs 1 oz

Accessories

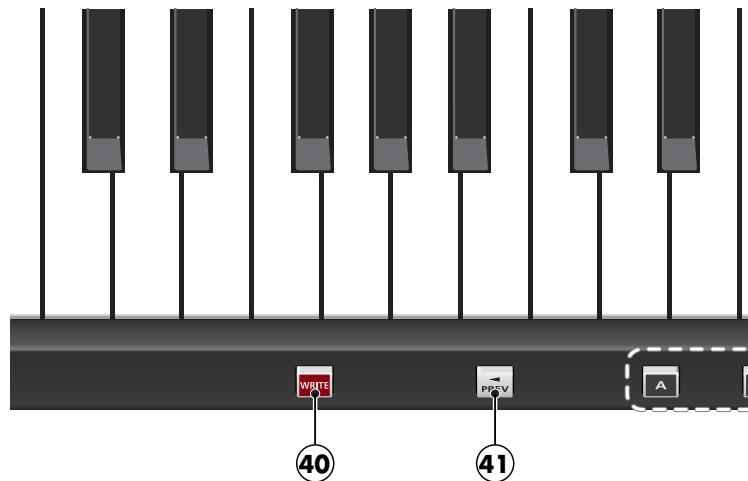
Owner's Manual (#5100020682)
CD-ROM (USB Audio/MIDI driver) (#******)
DVD-ROM (SONAR LE) (#******)
USB MEMORY Protector (#5100005713)
Power Cord (#5100012292, #00894378, #03450323, #00894389, #00907001,
#5100013842)

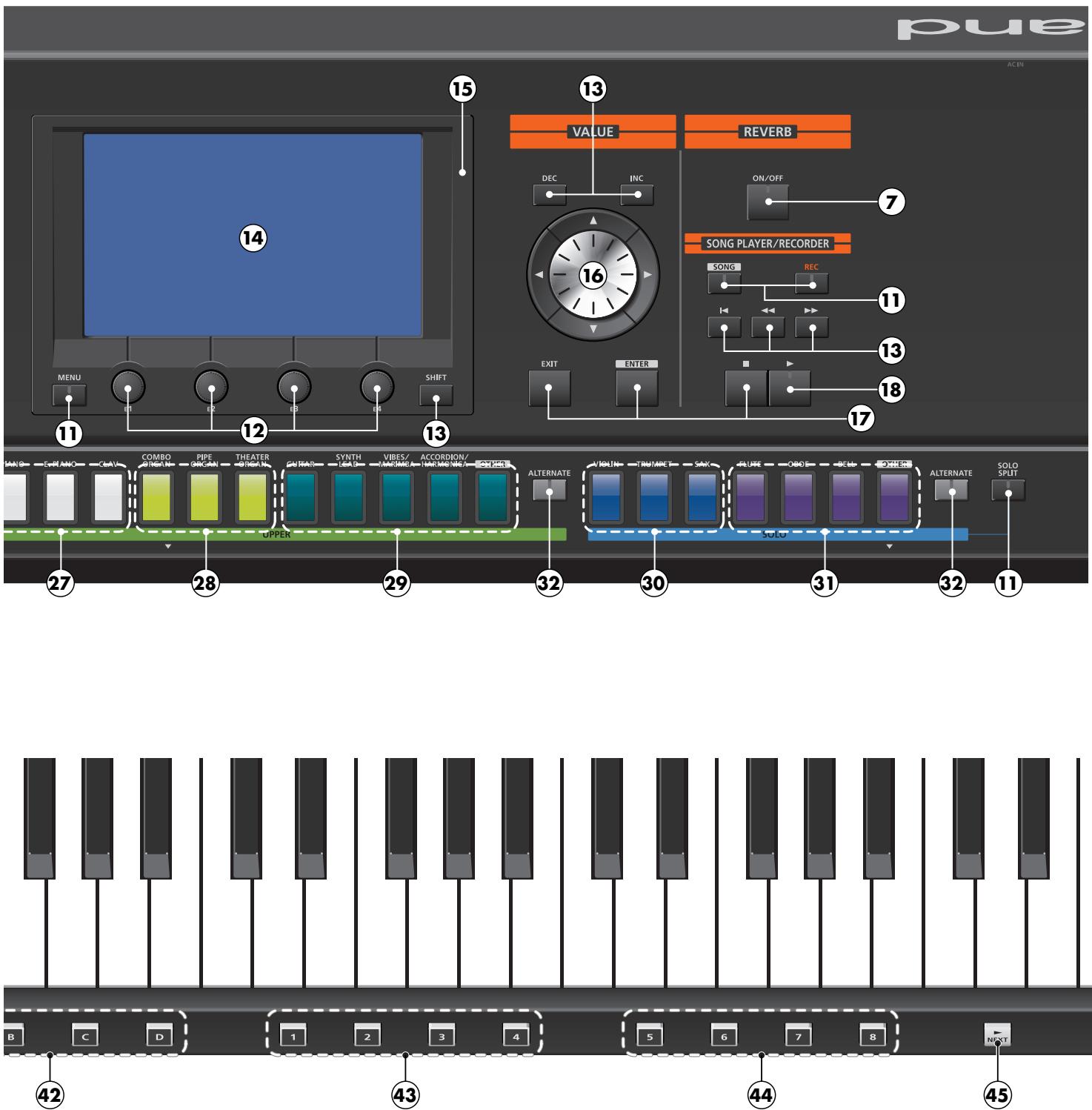
Location of Controls (Top, Front)

Top Panel



Front Panel





Location of Controls (Top, Front) Parts List

Top Panel

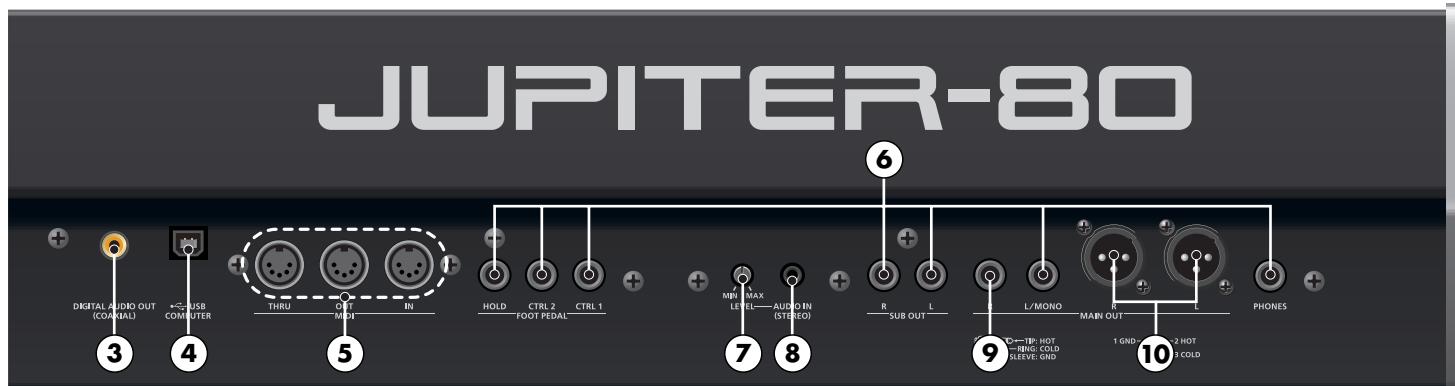
No.	Part Code	Part Name	Description	Q'ty
1	5100017578	TOP PANEL		1
2	5100001159	SUB-ASSY USB BOX GW-8 (LF)	(990-07040-10-04)	1
3	5100020256	Y S-KEYTOP	LD3H BLK	2
	13169711	TACT SWITCH	SKPDALD010	6
	02125167	LED	SLI-343DCT32W	6
4	5100020679	M R-KNOB	KF-ELA BLK/LCG	1
	13289189	POTENTIOMETER	RK14K1240A2D L1=15 50KBX2	1
5	02010434	Y S-KEYTOP	LD4H BLK	1
	13169711	TACT SWITCH	SKPDALD010	4
	02125167	LED	SLI-343DCT32W	4
6	02016445	Y S-KEYTOP	LD1H BLK	1
	13169711	TACT SWITCH	SKPDALD010	1
	03904323	LED (BLUE)	SLR-343BCTT32	1
7	02016445	Y S-KEYTOP	LD1H BLK	2
	13169711	TACT SWITCH	SKPDALD010	2
	02125167	LED	SLI-343DCT32W	2
8	02016445	Y S-KEYTOP	LD1H BLK	4
	13169711	TACT SWITCH	SKPDALD010	4
	04902023	LED (RED/GREEN)	SPI-325MUWT31	4
9	22485295	D S-KNOB	S BLK/LCG	4
	04897256	SLIDE POTENTIOMETER	RS45111-0A10-C0-P1-B103	4
	5100020229	D S-ESCT	SX4H-C L=45 BLK	1
	5100021485	POT DUST COVER		1
10	5100020230	LED COVER		4
	03788578	LED	DD-12HWB (H/I RANK)	4
11	02011412	Y S-KEYTOP	SD1H BLK	5
				1 included in Panel-C, 2 included in Panel-R, 1 included in Tone-L, 1 included in Tone-R Board
	01340290	TACT SWITCH	EVQ11A H=5.0	5
	02125167	LED	SLI-343DCT32W	5
12	5100016996	M R-KNOB	LF BLK MNP	4
	01905467	ROTARY ENCODER	EVE GC1 F20 24B	4
13	02011456	Y S-KEYTOP	SX1H BLK	6
				1 included in Panel-C, 5 included in Panel-R Board
	01340290	TACT SWITCH	EVQ11A H=5.0	6
14	5100016526	LCD	LQ070Y3DG3B	1
	5100020246	LCD CUSHION		3
15	5100020228	LCD ESCT		1
	5100020955	LCD TAPE		2
16	04565478	KNOB	ZE R-KNOB LF	1
	01905467	ROTARY ENCODER	EVE GC1 F20 24B	1
	04566445	KEYTOP	ZE CURSOR KEY A	1
	04566456	KEYTOP	ZE CURSOR KEY B	1
	02781634	TACT SWITCH	SKRGAED010	4
	05010278	KEYTOP COVER		1
	40232134	ACETATE TAPE	NITTO #5 BLACK W5MM 20M	-
17	02016390	Y S-KEYTOP	LX1H BLK	3
	13169711	TACT SWITCH	SKPDALD010	3
18	02016445	Y S-KEYTOP	LD1H BLK	1
	13169711	TACT SWITCH	SKPDALD010	1
	01239867	LED (RED/GREEN) CLR	SML72423C TP15	1
19	01343089	ESCUTCHEON	D-BEAM CONTROLLER ESCT BLK	1
20	01900612	DIODE	TPS611(F)	1
	12169368	LED SPACER	LDS-40B	1
21	03126134	LED (INFRARED)	TLN233(F)	1
	02230578	LED SPACER	LDS-50R	1
22	02016456	Y S-KEYTOP	LD2H BLK	1
	13169711	TACT SWITCH	SKPDALD010	2
	02125167	LED	SLI-343DCT32W	2
23	02016501	Y S-KEYTOP	LD2H MCG	1
	13169711	TACT SWITCH	SKPDALD010	2
	02125167	LED	SLI-343DCT32W	2
24	5100023704	RUBBER SW	1H-A RED	1
	5100019647	LED	TLRMK1100C(T11)	1
	5100020325	ESCUTCHEON	3H	1/3
25	5100023706	RUBBER SW	2H-A ORN	2
	5100019648	LED	TLOK1100C(T11)	4
	5100020325	ESCUTCHEON	3H	4/3
26	5100023707	RUBBER SW	2H-A YEL	2
	5100019378	LED	TLWF1100C(T11)	4
	5100020325	ESCUTCHEON	3H	4/3
27	5100023709	RUBBER SW	3H-A WHT	1
	5100019378	LED	TLWF1100C(T11)	3
	5100020325	ESCUTCHEON	3H	1

No.	Part Code	Part Name	Description	Q'ty
28	5100023708	RUBBER SW	3H-A YEG	1
	5100019995	LED	SDFG04002A1-A	3
	5100020325	ESCUTCHEON	3H	1
29	5100023711	RUBBER SW	3H-A GRN	1
	5100023710	RUBBER SW	2H-A GRN	1
	5100019378	LED	TLWF1100C(T11)	5
	5100020325	ESCUTCHEON	3H	5/3
30	5100023712	RUBBER SW	3H-A BLU	1
	5100019994	LED	SDFB04002B1-A	3
	5100020325	ESCUTCHEON	3H	1
31	5100023705	RUBBER SW	2H-A PUR	2
	5100019378	LED	TLWF1100C(T11)	4
	5100020325	ESCUTCHEON	3H	4/3
32	04018056	Y S-KEYTOP	SD1H MCG	3
	01340290	TACT SWITCH	EVQ11A H=5.0	3
	02125167	LED	SLI-343DCT32W	3
33	22495278	D S-KEYTOP	MD2H BLK (W/WINDOW)	1
	02781634	TACT SWITCH	SKRGAED010	2
	01787045	LED (ORANGE)	SLR-325DCT31	2
34	03234723	BENDER	PB-H0204	1

Front Panel

No.	Part Code	Part Name	Description	Q'ty
40	5100020241	RUBBER SW	1H-A	1
	5100020244	ESCUTCHEON	1H	1
	03459534	LED (RED)	TLSU1002A(TO2)	1
41	5100020242	RUBBER SW	1H-B	1
	5100020244	ESCUTCHEON	1H	1
	03565423	LED	TLOU1002A(TO2)	1
42	5100020238	RUBBER SW	4H-A	1
	5100020245	ESCUTCHEON	2H	2
	03565423	LED	TLOU1002A(TO2)	4
43	5100020239	RUBBER SW	4H-B	1
	5100020245	ESCUTCHEON	2H	2
	03565423	LED	TLOU1002A(TO2)	4
44	5100020240	RUBBER SW	4H-C	1
	5100020245	ESCUTCHEON	2H	2
	03565423	LED	TLOU1002A(TO2)	4
45	5100020243	RUBBER SW	1H-C	1
	5100020244	ESCUTCHEON	1H	1
	03565423	LED	TLOU1002A(TO2)	1

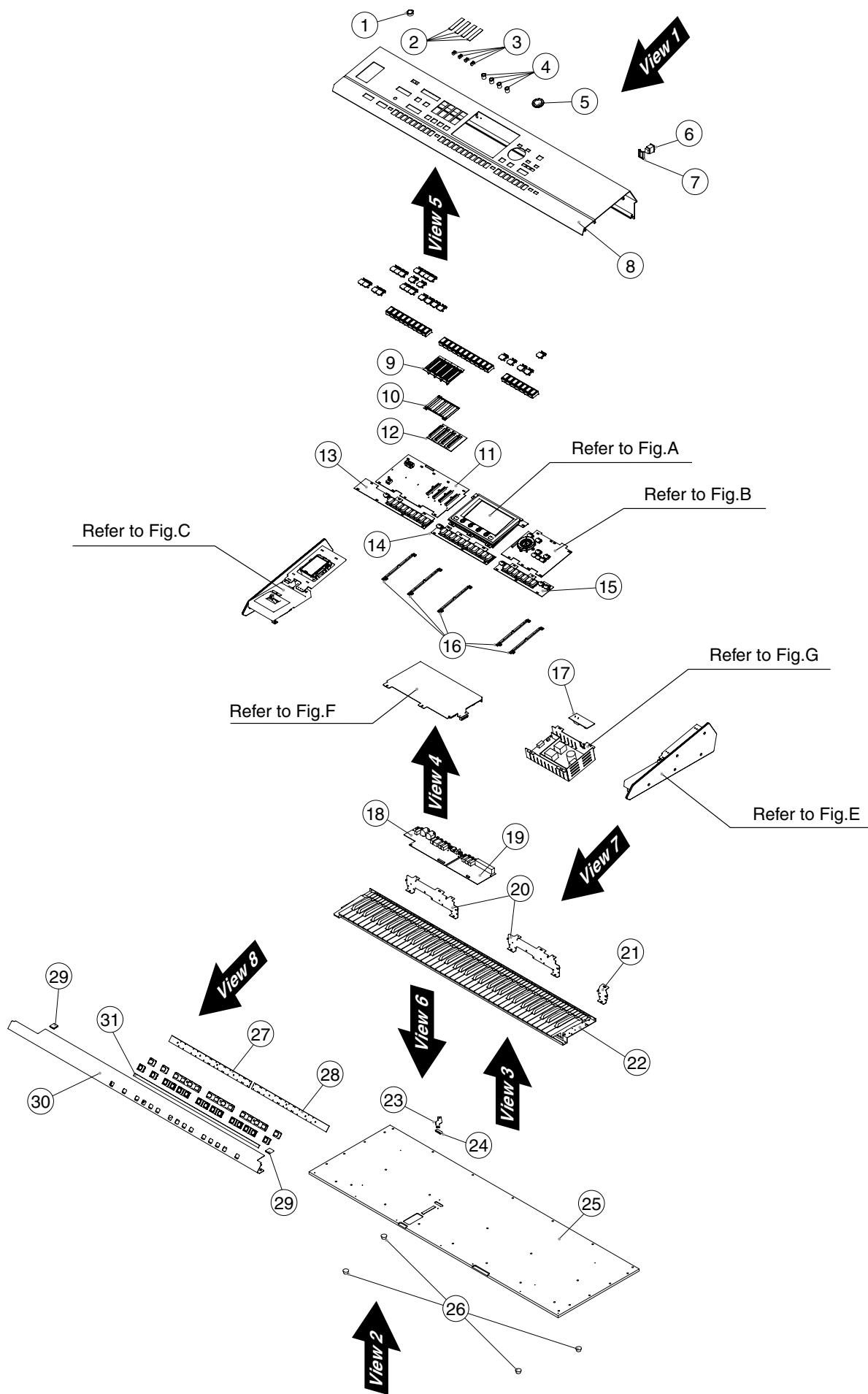
Location of Controls (Rear)



Location of Controls (Rear) Parts List

No.	Part Code	Part Name	Description	Q'ty
1	01786012	SEESAW SWITCH	JW-M11RKK	1
	01786045	SW HOLDER	AT-217K	1
2	5100021369	WIRING	W2 (INLET)	1
3	5100019749	RCA CONNECTOR	LPR6521-1301FC	1
4	5100009531	USB CONNECTOR B TYPE FEMALE	YKF45-0044N	1
5	13429273	MIDI CONNECTOR	YKF51-5046 (TRIPRET)	1
6	13449275	6.5MM JACK	YKB21-5074	7
7	02781390	9M/M ROTARY POTENTIOMETER	RK09K12A0D05 20KAX2	1
8	04452945	3.5MM JACK	YKB21-5344N	1
9	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	1
10	5100004097	XLR CONNECTOR	NC3MAH-0 NEW-A V1	2

Exploded View (All)



Exploded View (All) Parts List

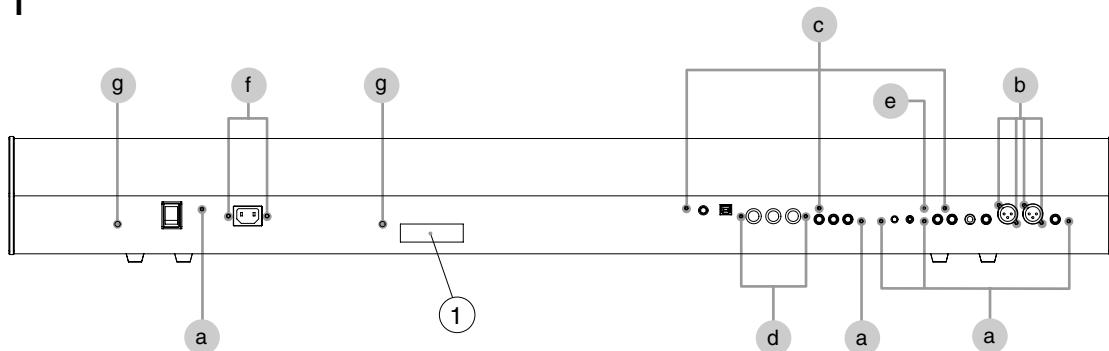
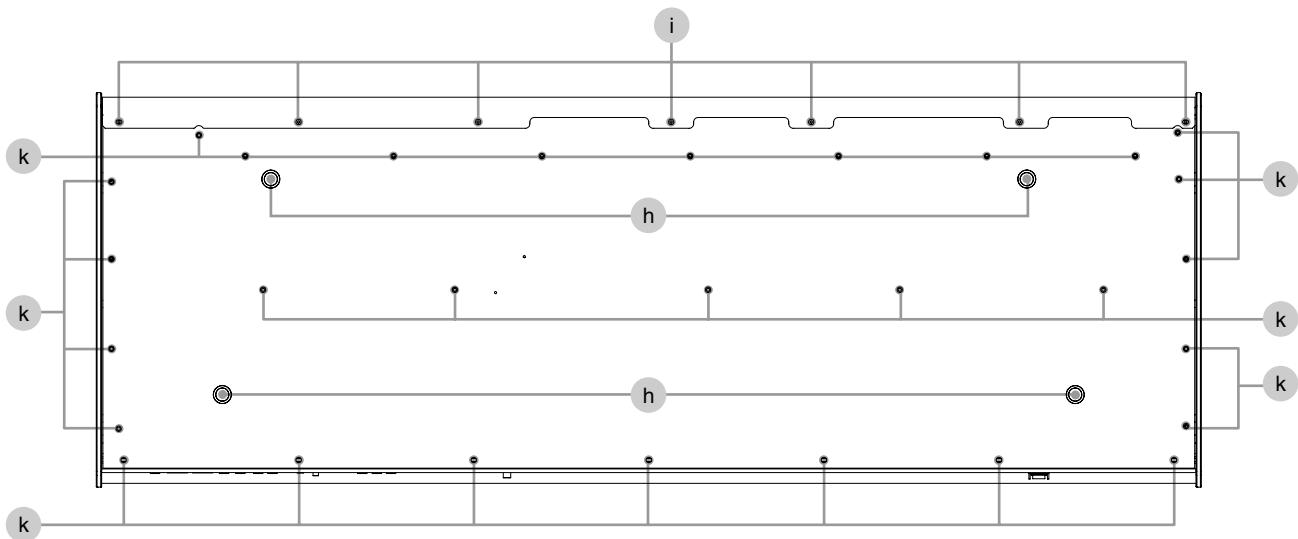
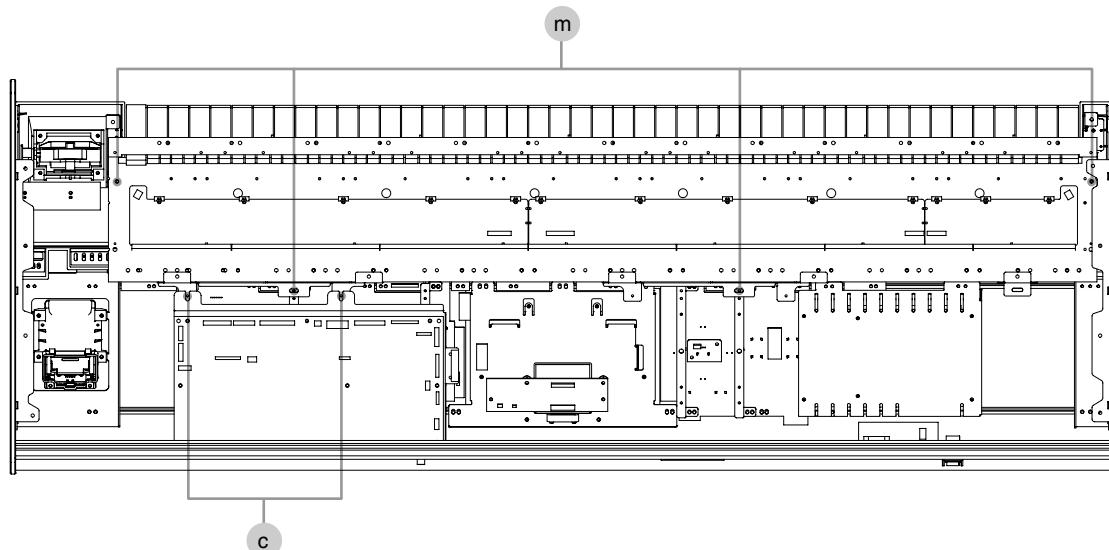
No.	Part Code	Part Name	Description	Q'ty
1	5100020679	M R-KNOB	KF-ELA BLK/LCG	1
2	5100020230	LED COVER		4
3	22485295	D S-KNOB	S BLK/LCG	4
4	5100016996	M R-KNOB	LF BLK MNP	4
5	04565478	KNOB	ZE R-KNOB LF	1
6	01786012	SEESAW SWITCH	JW-M11RKK	1
7	01786045	SW HOLDER	AT-217K	1
8	5100017578	TOP PANEL		1
9	5100020229	D S-ESCT	SX4H-C L=45 BLK	1
10	5100021485	POT DUST COVER		1
	5100020032	PANEL SHEET ASSY		
		* This unit includes the following parts.		
11	*****	PANEL-L BOARD		1
	*****	PANEL-C BOARD	Refer to Exploded View (Fig.A) (p. 17)	
	*****	PANEL-R BOARD	Refer to Exploded View (Fig.B) (p. 18)	
	*****	BENDER BOARD	Refer to Exploded View (Fig.C) (p. 20)	
	5100020033	PANEL SW SHEET ASSY		
		* This unit includes the following parts.		
12	*****	LED BOARD		1
13	*****	TONE-L BOARD		1
14	*****	TONE-C BOARD		1
15	*****	TONE-R BOARD		1
27	*****	FRONT-L BOARD		1
28	*****	FRONT-R BOARD		1
	*****	USB BOARD	Refer to Exploded View (Fig.D, E) (p. 22)	
16	04566378	PANEL PWB HOLDER		5
	5100020031	JACK SHEET ASSY		
		* This unit includes the following parts.		
17	*****	INLET BOARD		1
18	*****	JACK-A BOARD		1
19	*****	JACK-D BOARD		1
	*****	LCD BOARD	Refer to Exploded View (Fig.A) (p. 17)	
	*****	ENC BOARD	Refer to Exploded View (Fig.B) (p. 18)	
20	5100020232	PWB ANGLE		2
21	04566401	KBD HOLDER		1
22	5100001544	KEYBOARD ASSY FOR SERVICE	SK-1076-C	1
23	5100021599	FC SHEET		1
24	05011956	FERRITE-CORE	ESD-FPL-27-8	1
25	5100020226	BOTTOM BOARD		1
26	12359105	RUBBER FOOT W	RS-09 235-105	4
29	5100005712	BOTTOM CUSHION		2
30	5100020227	BLIND		1
31	40122490	DOUBLE-FACED TAPE	#500 W5MM 20M 40P	-

Disassembly Procedure

1. Remove all **k** screws (29) in **View 2**.
2. Lift the Top Panel slightly and detach from the Main Board the wiring connecting the Main Board and the Front-L Board.
#5100021361 WIRING 20624 FWR-P=1.00-K1-14-340
(15 in the **Wiring Diagram/Block Diagram** (p. 34))
3. Separate the Top Panel together with the keyboard from the Bottom Board.
4. Remove the **c** screws (2) and **m** screws (4) in **View 3**, then detach the keyboard.

* When assembling, invert the Top Panel together with the keyboard, then place them on the Bottom Board so that they cover the Bottom Board. Be sure to remember to connect the wiring.

Plane View (1)

View 1**View 2****View 3**

Plane View (1) Parts List

View 1

No.	Part Code	Part Name	Description	Q'ty
1	5100021415	STAND CAUTION LABEL		1
a	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	5
b	40233012	SCREW 2.6X8	BINDING TAPITTE P BZC	4
c	40011101	SCREW 3X8	BINDING TAPITTE B BZC	3
d	40011312	SCREW 3X8	BINDING TAPITTE P FE BZC	2
e	40019123	SCREW 3X8	BINDING TAPITTE S BZC	1
f	40238501	SCREW 4X8	BINDING TAPITTE P FE BZC	2
g	40011745	HEX NUT M4	FE ZC	2

View 2

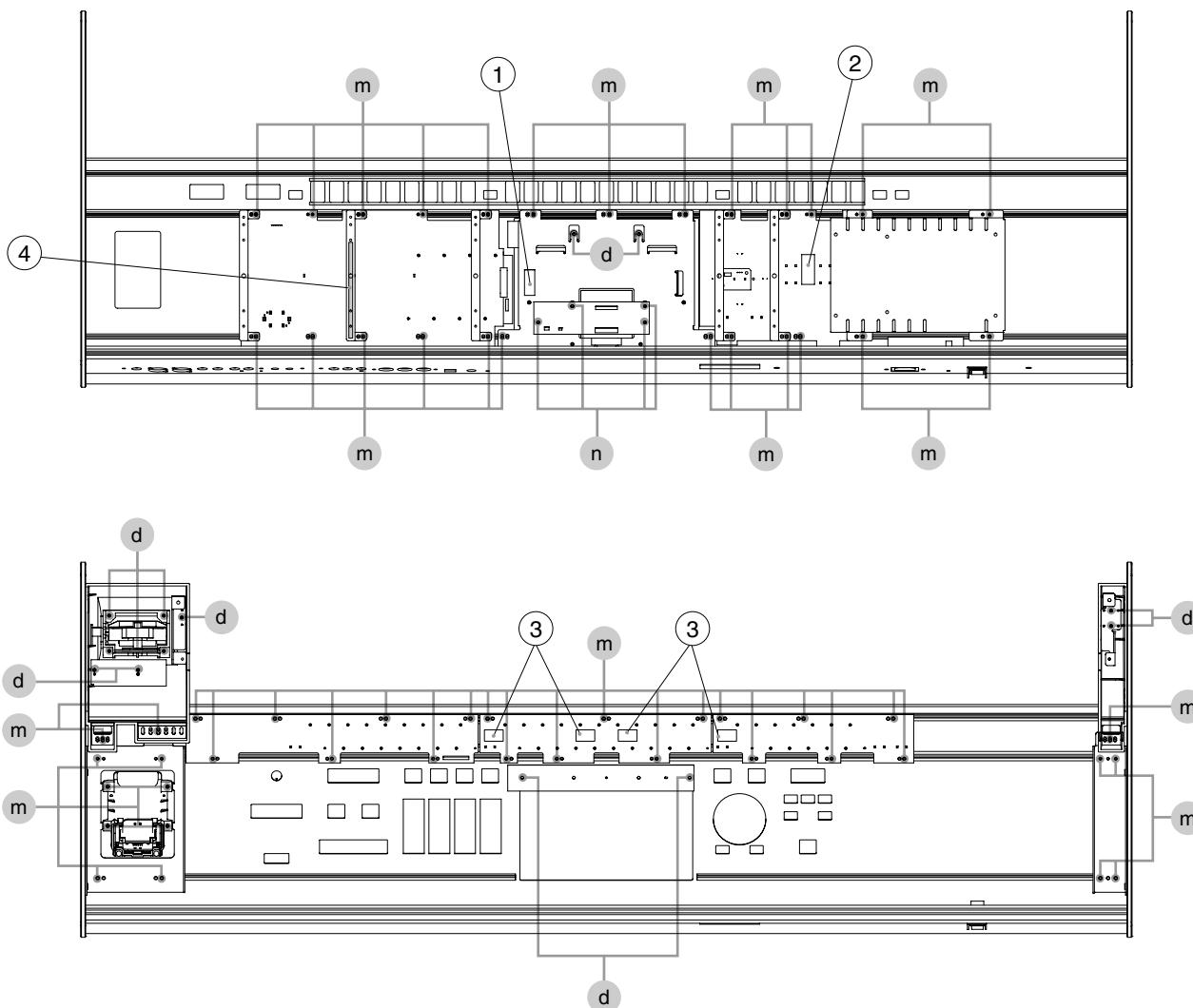
No.	Part Code	Part Name	Description	Q'ty
h	40010734	SCREW 3X12	BINDING TAPPING A FE ZC	4
i	40127545	SCREW 4X10	TRUSS TAPPING A FE BZC	7
k	40342456	SCREW 4X16	PAN WASHER HEAD TAPITTE B BZC	29

View 3

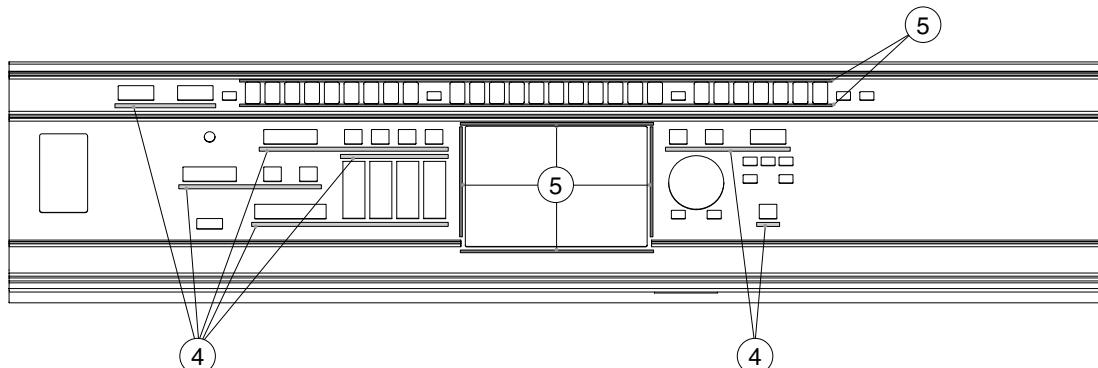
No.	Part Code	Part Name	Description	Q'ty
c	40011101	SCREW 3X8	BINDING TAPITTE B BZC	2
m	40011067	SCREW 3X8	BINDING TAPITTE B FE ZC	4

Plane View (2)

View 4



View 5



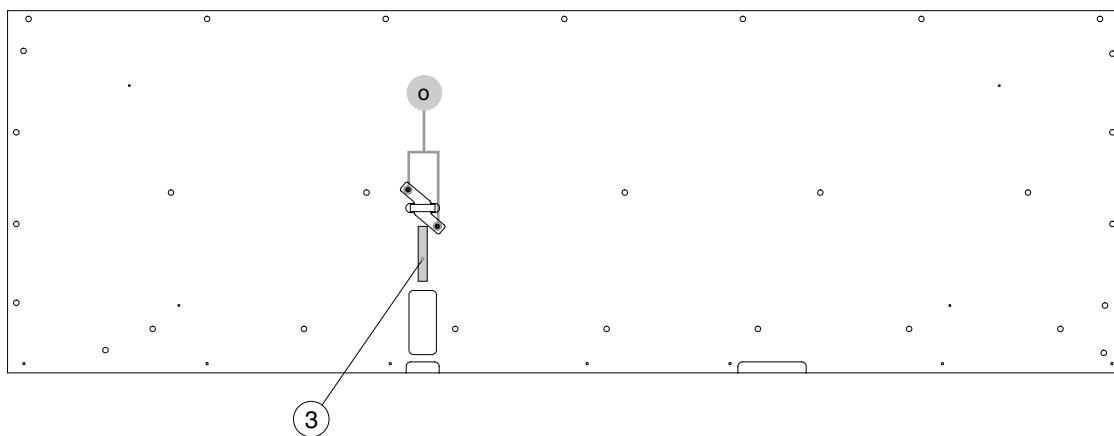
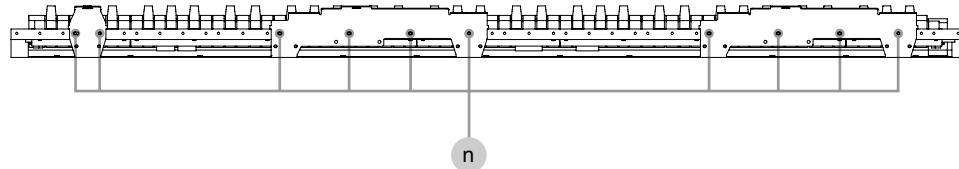
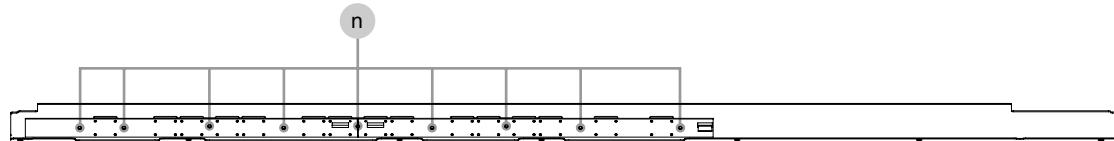
Plane View (2) Parts List

View 4

No.	Part Code	Part Name	Description	Q'ty
1	05012101	CLAMP	RFC-21V0	1
2	5100021495	LOCKING CLAMP	RLWC-3SV0	1
3	40567623	DOUBLE-FACED TAPE	#575 W15MM 30M	-
4	40122434	DOUBLE-FACED TAPE	#500 W7MM 20M 30P	-
d	40011312	SCREW 3X8	BINDING TAPITTE P FE BZC	13
m	40011067	SCREW 3X8	BINDING TAPITTE B FE ZC	59
n	40011056	SCREW 3X6	BINDING TAPITTE B ZC	4

View 5

No.	Part Code	Part Name	Description	Q'ty
4	40122434	DOUBLE-FACED TAPE	#500 W7MM 20M 30P	-
5	40122490	DOUBLE-FACED TAPE	#500 W5MM 20M 40P	-

Plane View (3)**View 6****View 7****View 8****View 6**

No.	Part Code	Part Name	Description	Q'ty
3	40122434	DOUBLE-FACED TAPE	#500 W7MM 20M 30P	-
o	40010645	SCREW 4X8	TRUSS TAPPING A FE BZC	2

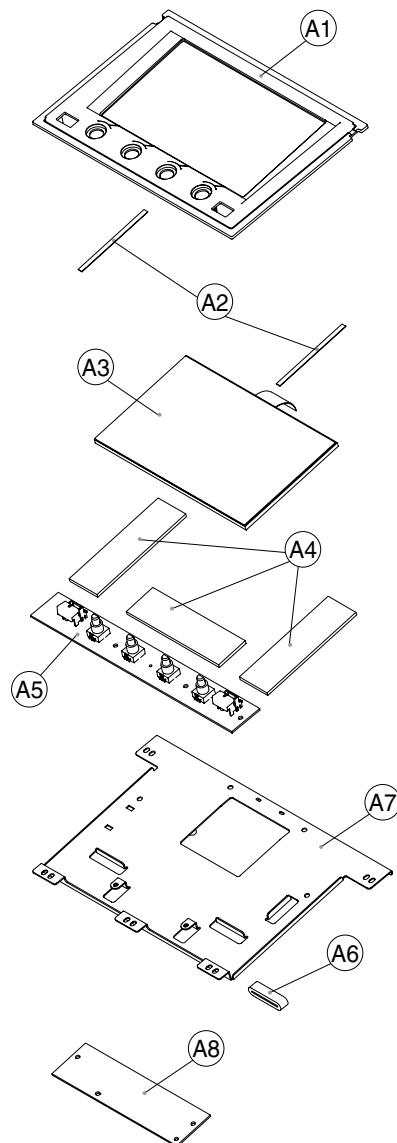
View 7

No.	Part Code	Part Name	Description	Q'ty
n	40011056	SCREW 3X6	BINDING TAPTITE B ZC	10

View 8

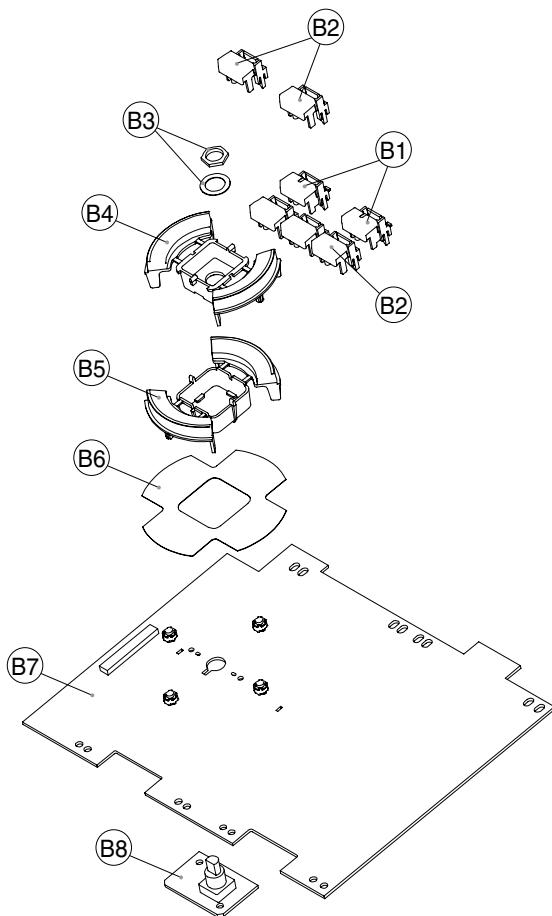
No.	Part Code	Part Name	Description	Q'ty
n	40011056	SCREW 3X6	BINDING TAPTITE B ZC	9

Exploded View (Fig.A)



No.	Part Code	Part Name	Description	Q'ty
A1	5100020228	LCD ESCT		1
A2	5100020955	LCD TAPE		2
A3	5100016526	LCD		1
A4	5100020246	LCD CUSHION	LQ070Y3DG3B	3
	5100020032	PANEL SHEET ASSY		
	*****	This unit includes the following parts.		
A5	*****	PANEL-C BOARD		1
	*****	PANEL-L BOARD	Refer to Exploded View (All) (p. 10)	
	*****	PANEL-R BOARD	Refer to Exploded View (Fig.B) (p. 18)	
	*****	BENDER BOARD	Refer to Exploded View (Fig.C) (p. 20)	
A6	5100019999	FERRITE-CORE	ESD-FPL-35-8	1
A7	5100020231	LCD HOLDER		1
	5100020031	JACK SHEET ASSY		
	*****	This unit includes the following parts.		
A8	*****	LCD BOARD	Refer to Exploded View (All) (p. 10)	1
	*****	INLET BOARD	Refer to Exploded View (All) (p. 10)	
	*****	JACK-A BOARD	Refer to Exploded View (All) (p. 10)	
	*****	JACK-D BOARD	Refer to Exploded View (All) (p. 10)	
	*****	ENC BOARD	Refer to Exploded View (Fig.B) (p. 18)	

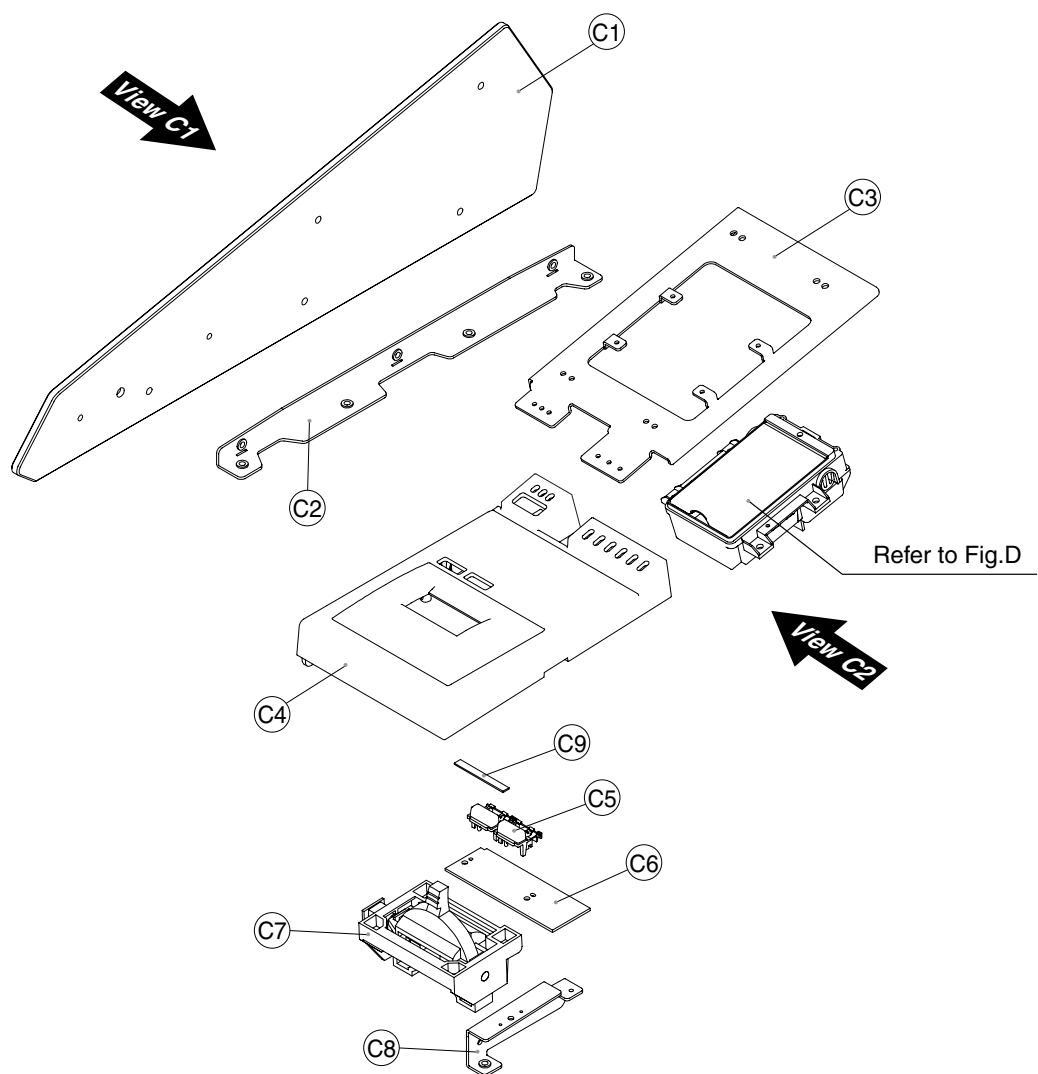
Exploded View (Fig.B)



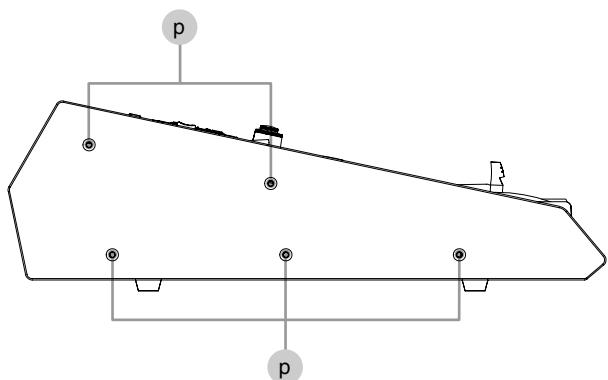
No.	Part Code	Part Name	Description	Q'ty
B1	02011412	Y S-KEYTOP	SD1H BLK (included in Panel-R Board)	2
B2	02011456	Y S-KEYTOP	SX1H BLK (included in Panel-R Board)	5
B3	*****	Nut	(included in the Rotary Encoder on ENC Board)	1
	*****	Washer	(included in the Rotary Encoder on ENC Board)	1
B4	04566456	KEYTOP	ZE CURSOR KEY B	1
B5	04566445	KEYTOP	ZE CURSOR KEY A	1
B6	05010278	KEYTOP COVER		1
	5100020032	PANEL SHEET ASSY		
		* This unit includes the following parts.		
B7	*****	PANEL-R BOARD		1
	*****	PANEL-L BOARD	Refer to Exploded View (All) (p. 10)	
	*****	PANEL-C BOARD	Refer to Exploded View (Fig.A) (p. 17)	
	*****	BENDER BOARD	Refer to Exploded View (Fig.C) (p. 20)	
	5100020031	JACK SHEET ASSY		
		* This unit includes the following parts.		
B8	*****	ENC BOARD		1
	*****	JACK-A BOARD	Refer to Exploded View (All) (p. 10)	
	*****	JACK-D BOARD	Refer to Exploded View (All) (p. 10)	
	*****	INLET BOARD	Refer to Exploded View (All) (p. 10)	
	*****	LCD BOARD	Refer to Exploded View (Fig.A) (p. 17)	

Exploded View (Fig.C)

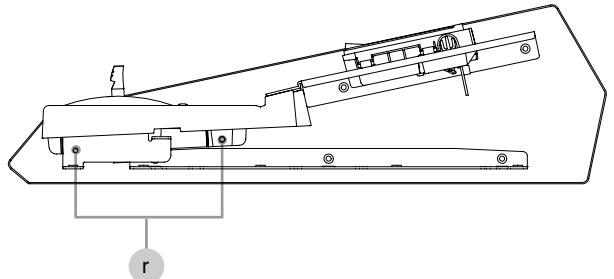
Fig. C



View C1



View C2



Exploded View (Fig.C) Parts List

Fig.C

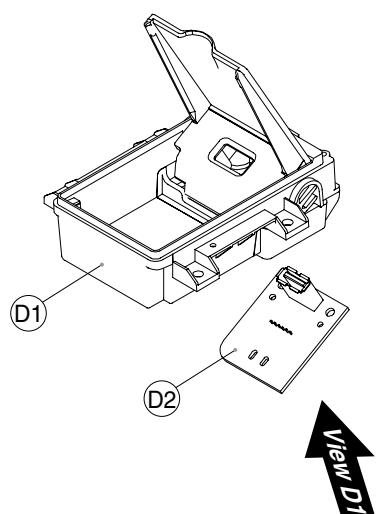
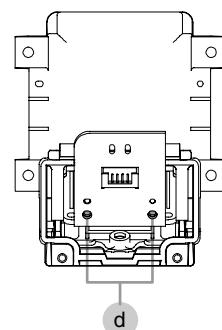
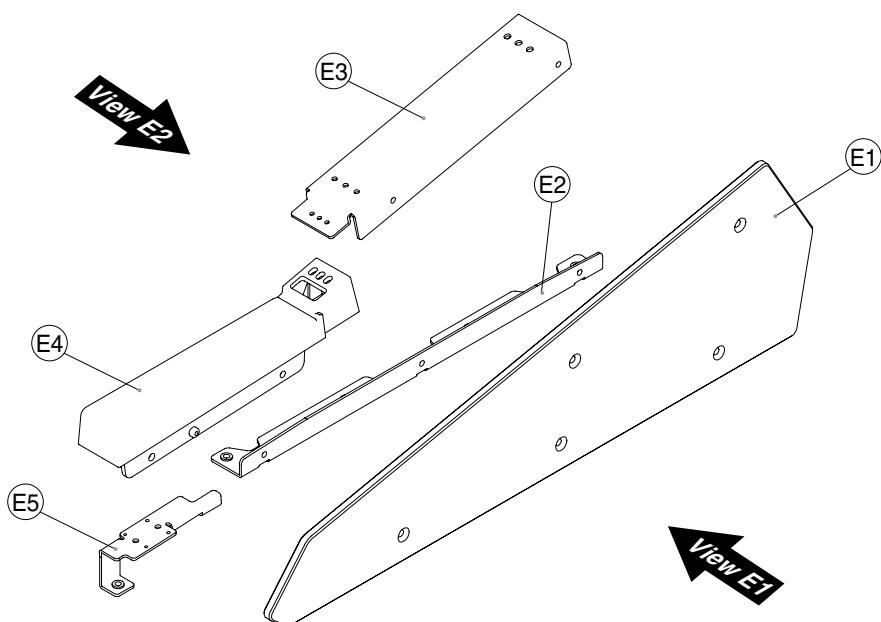
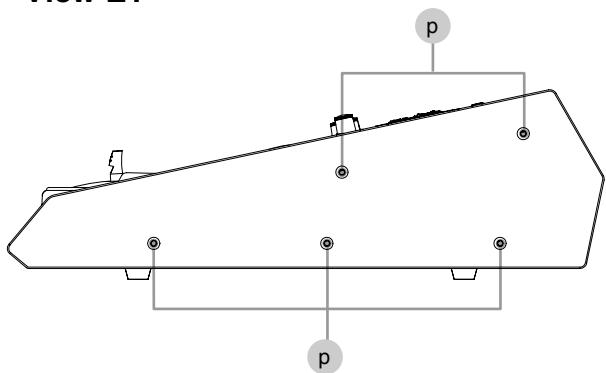
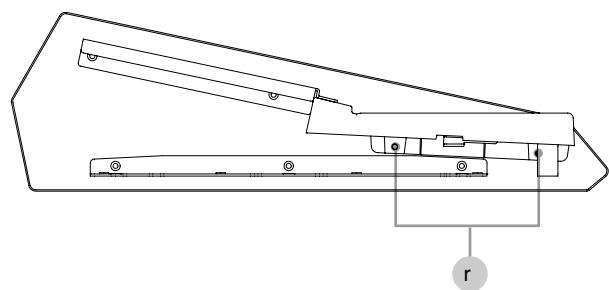
No.	Part Code	Part Name	Description	Q'ty
C1	5100020224	SIDE PANEL L		1
C2	5100020237	SIDE ANGLE		1
C3	5100020235	PANEL ANGLE L		1
C4	04892967	BENDER PANEL		1
C5	22495278	D S-KEYTOP	MD2H BLK (W/WINDOW)	1
	5100020032	PANEL SHEET ASSY		
	*****	* This unit includes the following parts.		
C6	*****	BENDER BOARD		1
	*****	PANEL-L BOARD	Refer to Exploded View (All) (p. 10)	
	*****	PANEL-C BOARD	Refer to Exploded View (Fig.A) (p. 17)	
	*****	PANEL-R BOARD	Refer to Exploded View (Fig.B) (p. 18)	
C7	03234723	BENDER	PB-H0204	1
C8	5100004025	END BLOCK HOLDER L		1
C9	40122434	DOUBLE-FACED TAPE	#500 W7MM 20M 30P	-

View C1

No.	Part Code	Part Name	Description	Q'ty
P	40346289	SCREW 4X12	OVAL HEAD TAPTITE B NI	5

View C2

No.	Part Code	Part Name	Description	Q'ty
r	40011123	SCREW 4X8	BINDING TAPTITE B FE BZC	2

Exploded View (Fig.D, E)**Fig. D****View D1****Fig. E****View E1****View E2**

Exploded View (Fig.D, E) Parts List

Fig.D

No.	Part Code	Part Name	Description	Q'ty
D1	5100001159	SUB-ASSY USB BOX GW-8 (LF)	(990-07040-10-04)	1
	5100020033	PANEL SW SHEET ASSY		
		* This unit includes the following parts.		
D2	*****	USB BOARD		1
	*****	TONE-L BOARD	Refer to Exploded View (All) (p. 10)	
	*****	TONE-C BOARD	Refer to Exploded View (All) (p. 10)	
	*****	TONE-R BOARD	Refer to Exploded View (All) (p. 10)	
	*****	FRONT-L BOARD	Refer to Exploded View (All) (p. 10)	
	*****	FRONT-R BOARD	Refer to Exploded View (All) (p. 10)	
	*****	LED BOARD	Refer to Exploded View (All) (p. 10)	

View D1

No.	Part Code	Part Name	Description	Q'ty
d	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	2

Fig.E

No.	Part Code	Part Name	Description	Q'ty
E1	5100020225	SIDE PANEL R		1
E2	5100020237	SIDE ANGLE		1
E3	5100020236	PANEL ANGLE R		1
E4	04892978	END BLOCK		1
E5	5100004026	END BLOCK HOLDER R		1

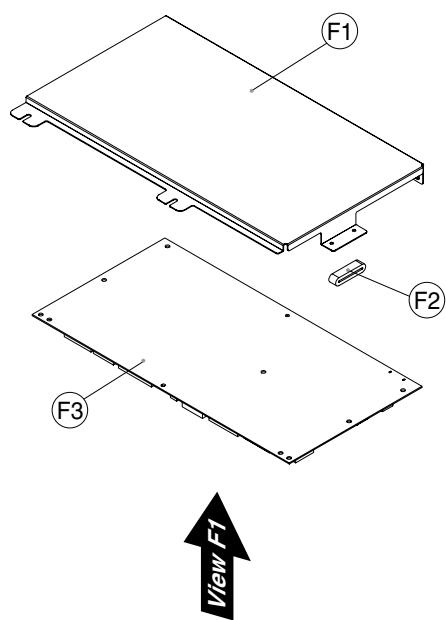
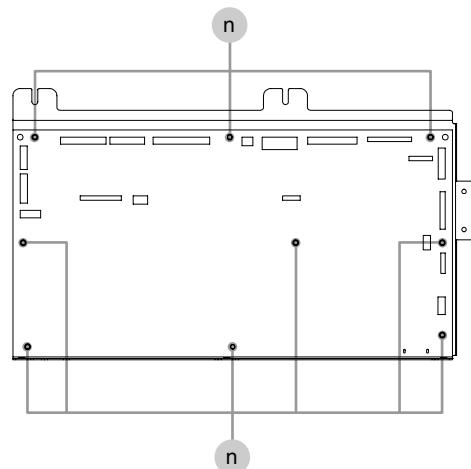
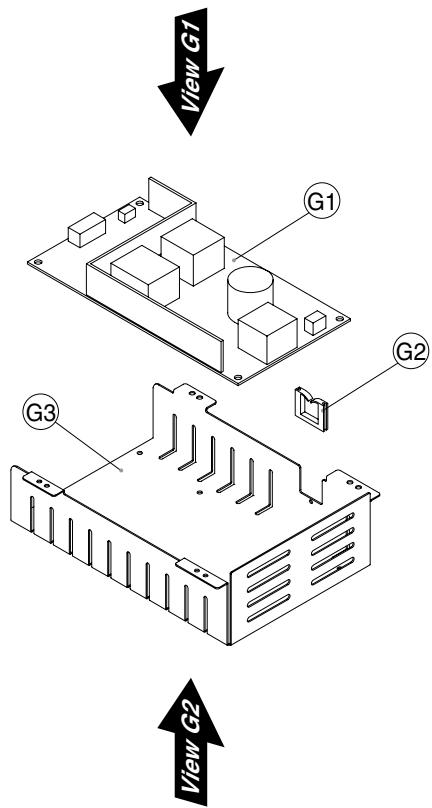
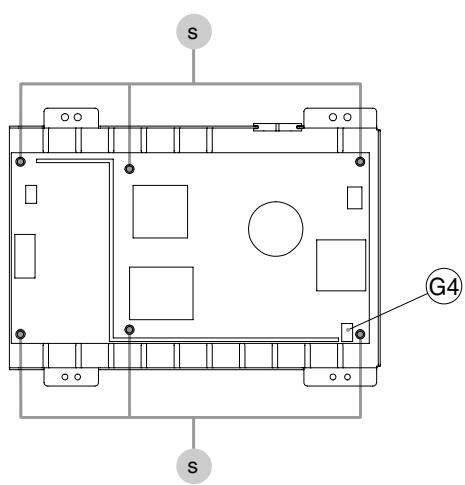
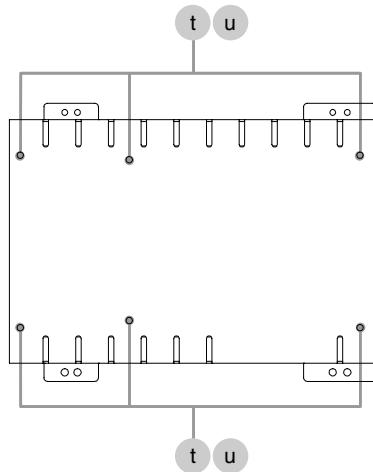
View E1

No.	Part Code	Part Name	Description	Q'ty
p	40346289	SCREW 4X12	OVAL HEAD TAPTITE B NI	5

View E2

No.	Part Code	Part Name	Description	Q'ty
r	40011123	SCREW 4X8	BINDING TAPTITE B FE BZC	2

Exploded View (Fig.F, G)

Fig. F**View F1****Fig. G****View G1****View G2**

Exploded View (Fig.F, G) Parts List

Fig.F

No.	Part Code	Part Name	Description	Q'ty
F1	5100020233	PWB HOLDER MAIN		1
F2	5100019999	FERRITE-CORE	ESD-FPL-35-8	1
F3	5100020030	MAIN BOARD ASSY		1

View F1

No.	Part Code	Part Name	Description	Q'ty
n	40011056	SCREW 3X6	BINDING TAPTITE B ZC	9

Fig.G

No.	Part Code	Part Name	Description	Q'ty
G1	5100005906	SWTNGL REG	RLM50W REV.B	1
G2	01455523	CORD BUSHING	EDS-1717U	1
G3	04902678	POWER SUPPLY HOLDER		1

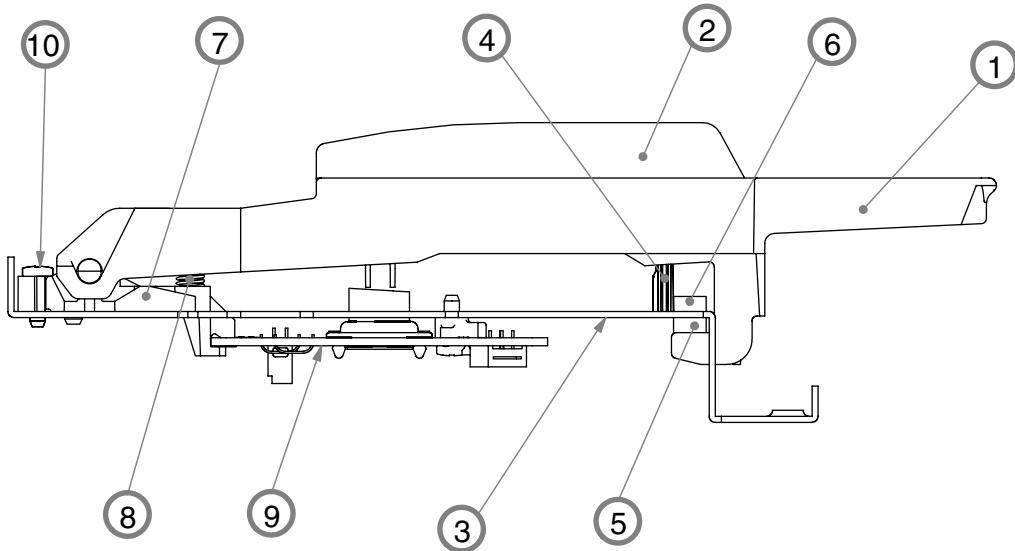
View G1

No.	Part Code	Part Name	Description	Q'ty
G4	5100005900	SEAL	IEC GND SEAL #5017 (W)	1
s	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	6

View G2

No.	Part Code	Part Name	Description	Q'ty
t	40017934	SCREW M3X6	PAN MACHINE W/SW+PW(L) FE ZC	6
u	40560723	STANDOFF	M3-L5.5-H10	6

Keyboard Parts List (SK-1076-C)

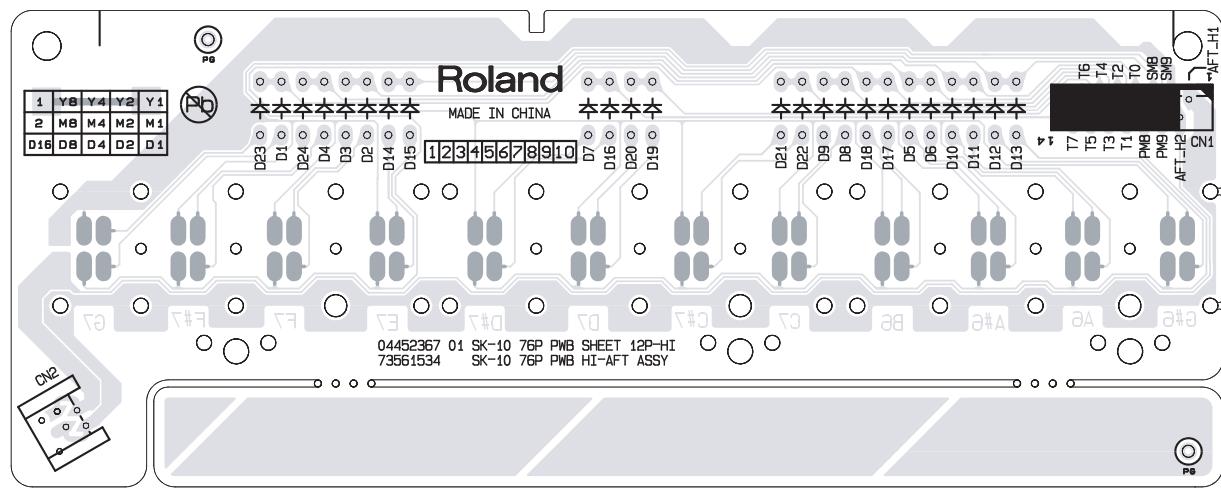
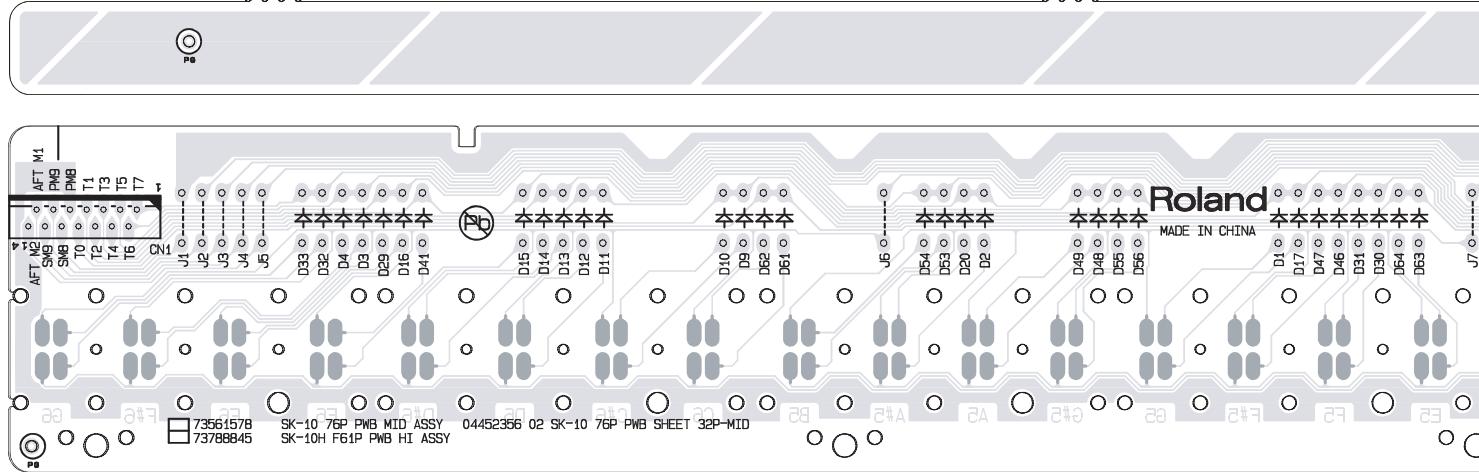
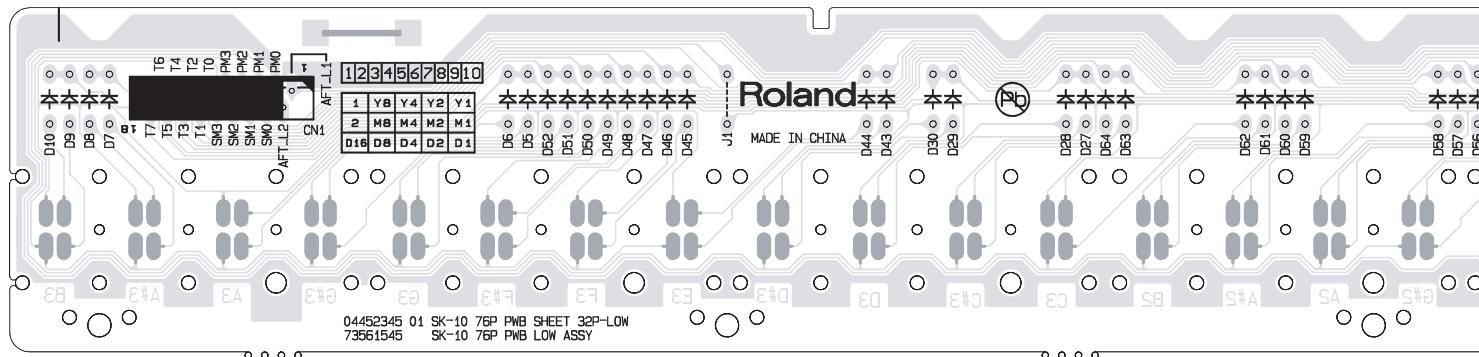


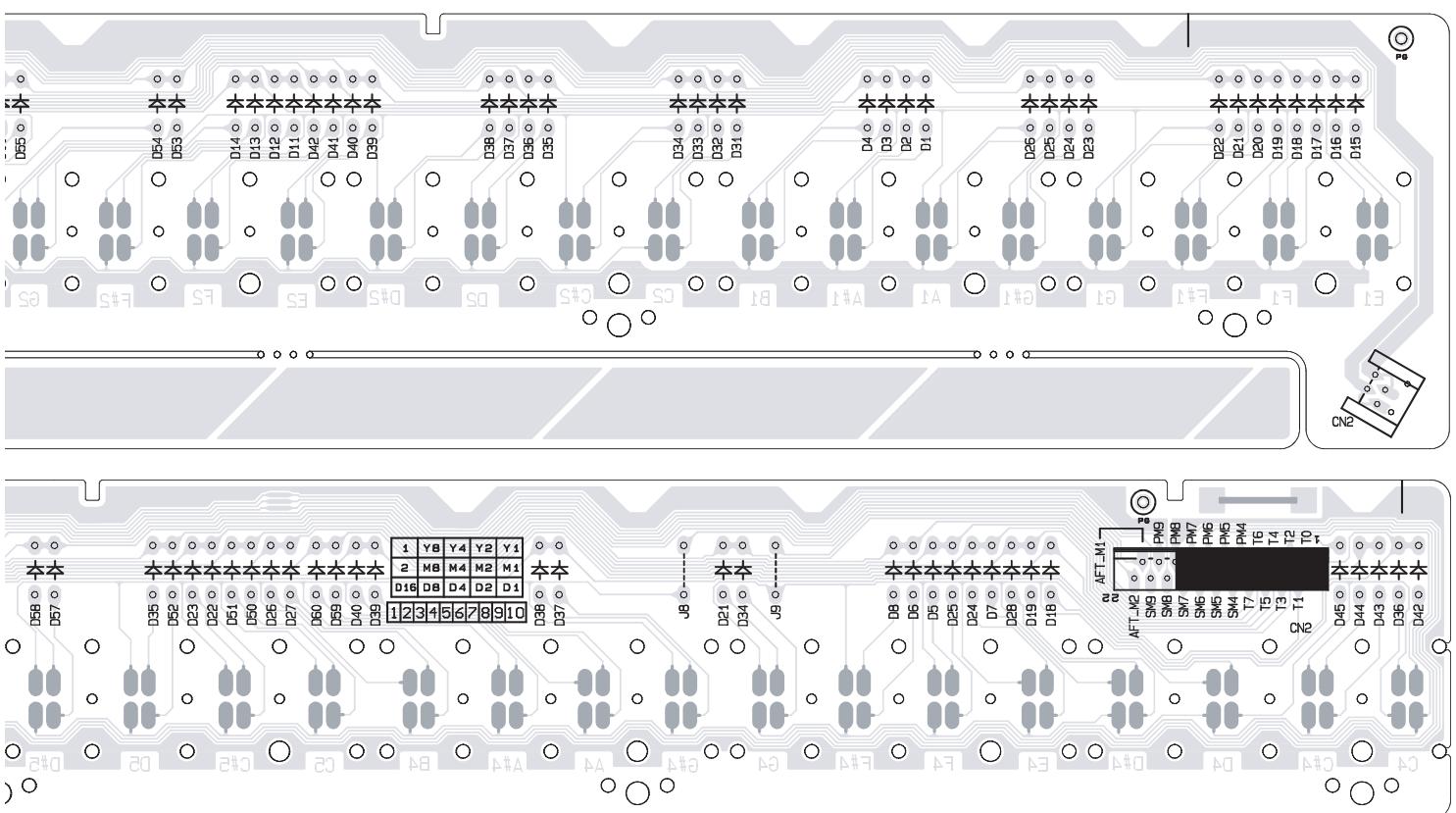
No.	Part Code	Part Name	Description	Q'ty
	5100001544	KEYBOARD ASSY	SK-1076-C	
1	73671489	NATURAL KEY	SK-9 CF (W/WEIGHT)	13
	73671490	NATURAL KEY	SK-9 EB (W/WEIGHT)	12
	73671501	NATURAL KEY	SK-9 D (W/WEIGHT)	6
	73671512	NATURAL KEY	SK-9 G (W/WEIGHT)	6
	73671523	NATURAL KEY	SK-9 A (W/WEIGHT)	6
	73896889	NATURAL KEY	SK-9 E' (W/WEIGHT)	1
	73781067	NATURAL KEY	SK-9 G' (W/WEIGHT)	1
2	73671545	SHARP KEY	SK-9 (W/WEIGHT)	31
3	*****	SK-10 CHASSIS 76P LONG		1
4	04347078	GUIDE BUSHING-B		76
5	00895212	SK-9 CUSHION 76P		1
6	04013290	AFTERTOUCH-B(76P)	SK-976	1
7	04452190	SUB CHASSIS 12P	SK-10	5
	04452223	SUB CHASSIS 8P HI	SK-10	1
	04452234	SUB CHASSIS 8P LOW	SK-10	1
8	01231534	SPRING-WT2	SK-9	76
9	5100006738	PWB SET ASSY	SK-10 76P HI-AFT JP	1
10	40012256	SCREW M3X10	BINDING B-TITE FE ZC	40

* The contact circuit board (#5100006738) is a set of a lower board, a middle board and an upper board, and includes rubber switches.

* The cables (#04347923, #04456078) which connect the contact circuit board to Main Board aren't included in this unit (#5100001544).

Keyboard Circuit Board (SK-1076-C)





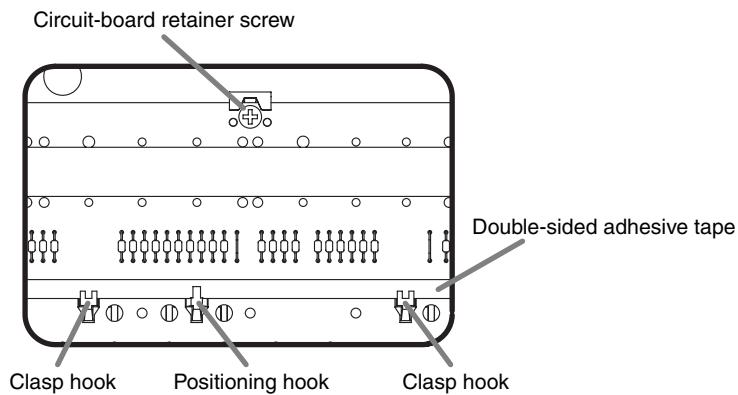
Keyboard Assembly Procedure (SK-1076-C)

How to Install the Contact Circuit Board

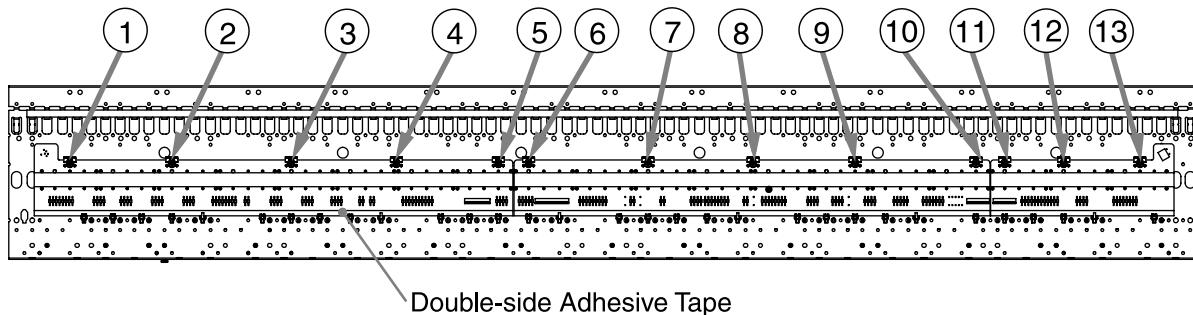


The service-use contact circuit board (#5100006738) is supplied with the rubber switches mounted. To prevent problems with sound generation due to dust contamination, do not detach the rubber switches.

1. Turn the keyboard chassis upside-down.
2. Peel off the backing paper from the double-sided adhesive tape affixed to the edge surfaces of the contact circuit board.
3. Align the notch in the contact circuit board with the **positioning hook** on the keyboard chassis, and install the circuit board so that it is clasped by the **clasp hooks**.



4. Working from the bass section to the treble section, tighten the screws in the numbered sequence shown in the figure.



* If the contact circuit board is warped, tighten while pressing down lightly on the center of the circuit board.

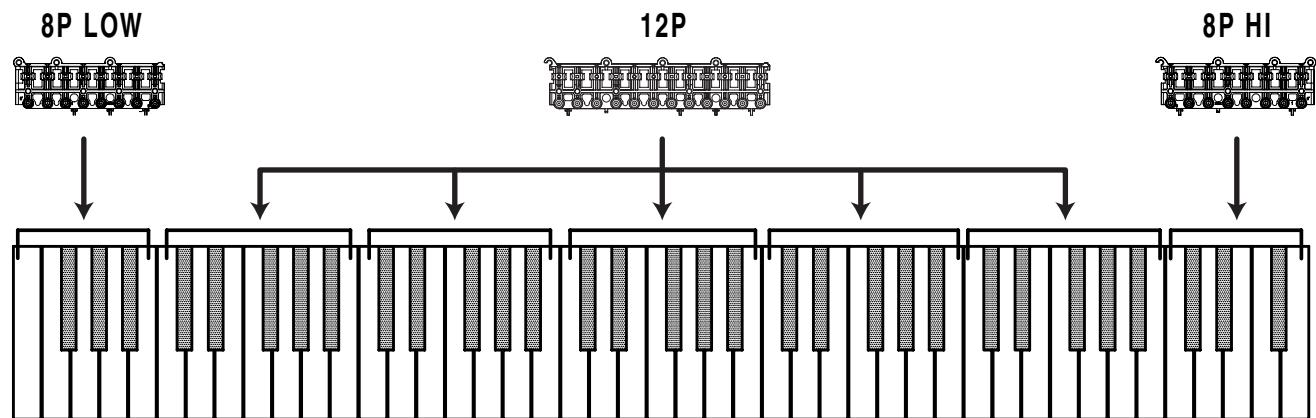
* If using an electric screwdriver, set the screw-tightening torque at 0.8 N. Applying excessive force to the circuit board may damage the pattern and cause problems with sound generation.

Arrangement of the Sub-chassis

The sub-chassis are of three types having a different number of keys.

#04452190	SUB CHASSIS 12P
#04452223	SUB CHASSIS 8P HI
#04452234	SUB CHASSIS 8P LOW

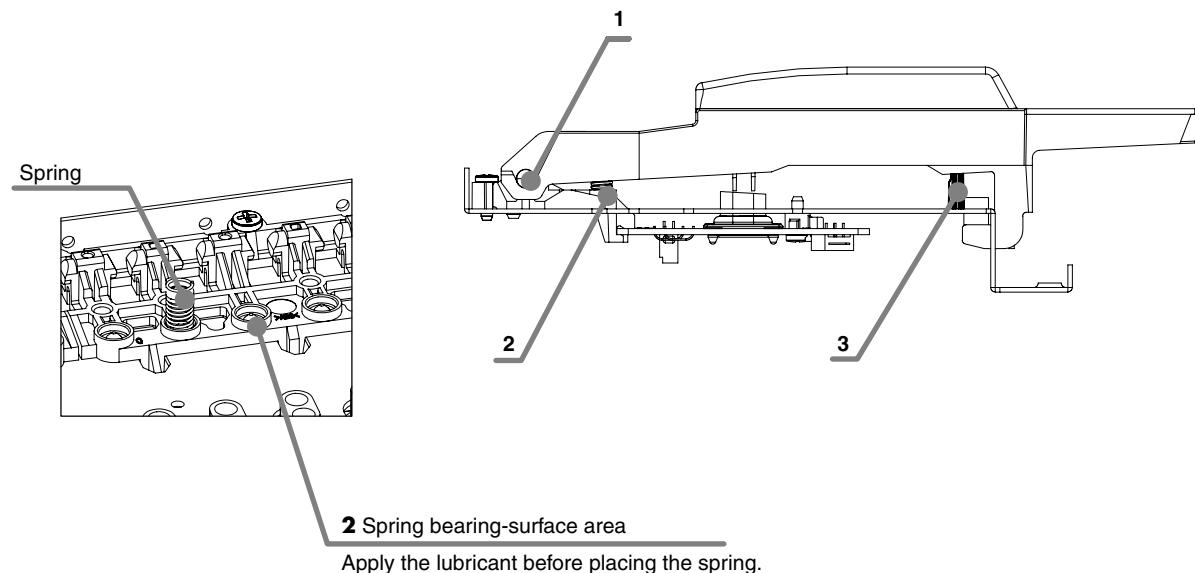
When replacing, refer to the figure below and install the specified sub-chassis at the specified location.



Greasing Points

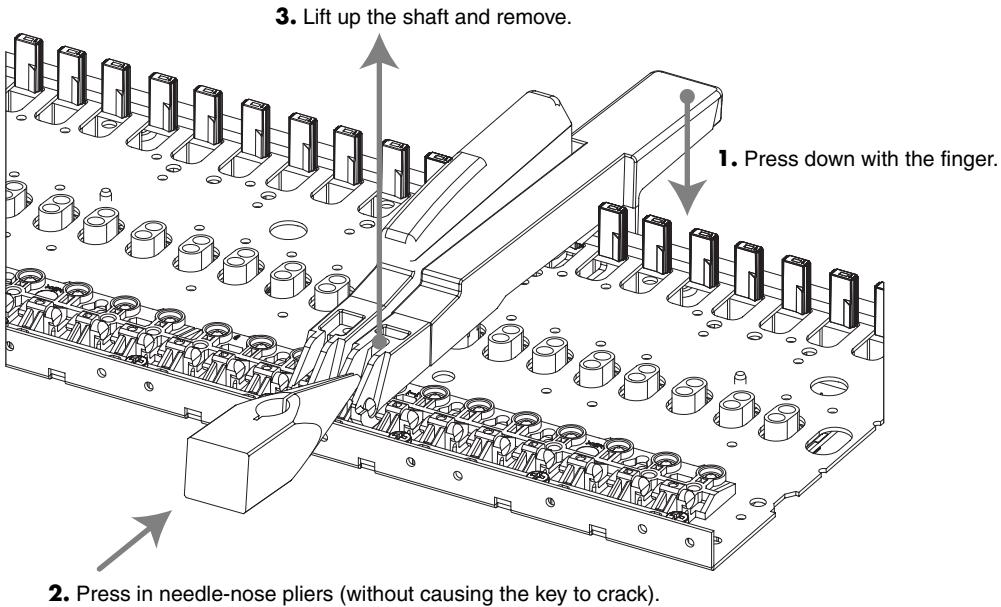
When replacing keys or the sub-chassis, apply the specified lubricant at the locations shown in the figure.

Location	Lubricant
1 Key and sub-chassis shaft area	MOLYKOTE G-1039 (#17041858) pink
2 Spring bearing-surface area	MOLYKOTE G-1039 (#17041858) pink
3 White- and black-key guide-bushing sides	FLOIL G-336A (#17049543) white



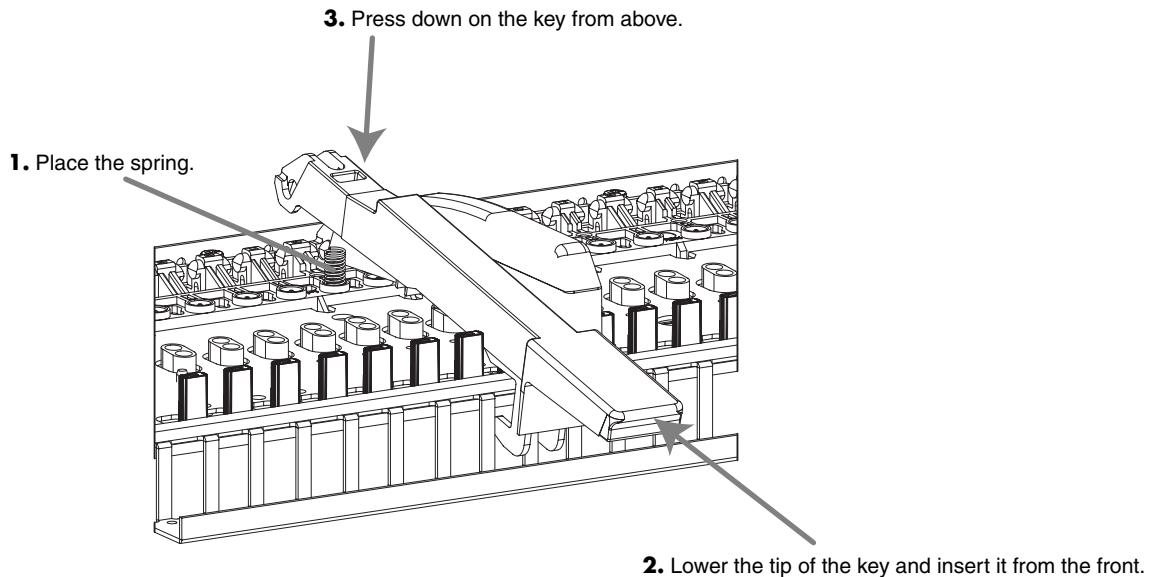
How to Remove Keys

1. Press down on the tip of the key with the finger.
 2. Insert needle-nose pliers into the U-shaped groove on the shaft side and press in the direction of the arrow.
 3. Lift up the shaft and detach the key from the chassis.
- * Before removing a black key, be sure to first remove the white keys on both sides.



How to Attach Keys

1. Place the spring (#01231534) on the chassis.
 2. With the tip of the key angled downward, insert the key in the direction of the arrow shown in the figure.
 3. Press down near the key shaft from above and fit the key into the shaft.
- * Attaching a key with the spring not upright results in altered touch. Make sure the spring is not squeezed.
 * Be sure to attach a black key while the white keys on both are uninstalled.



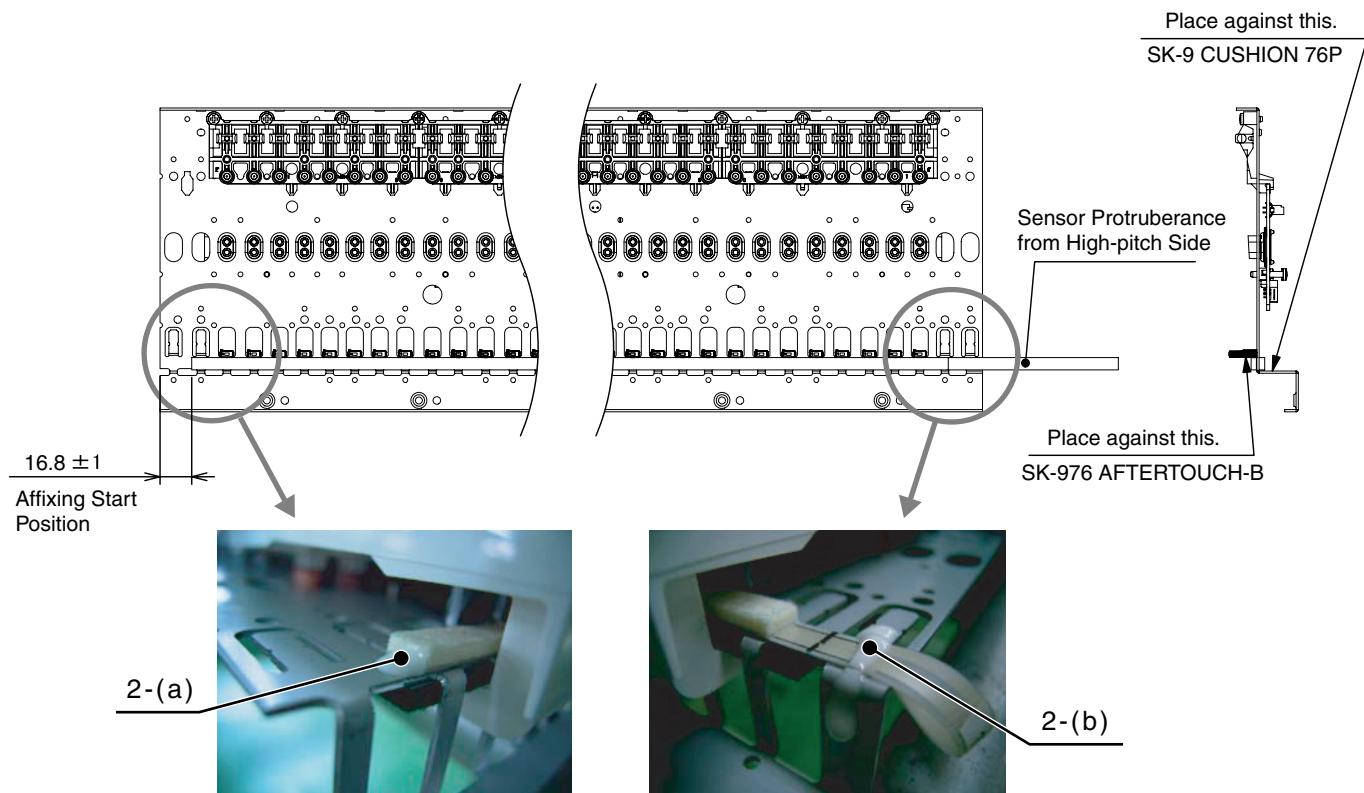
Installing the Aftertouch and Cushions

- Affix from the "Affixing Start Position" shown in the figure below.

Place the Aftertouch (white) against the guide bushing, and the SK-9 Cushions (green) against the chassis.

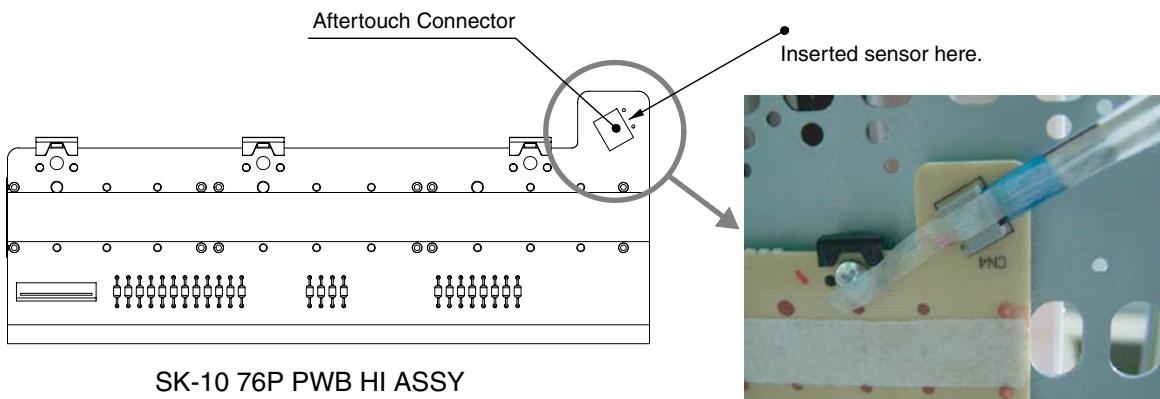
- Apply Syrex to the Aftertouch 2-(a)/(b) areas.

Apply so that the 2-(a) cushion end is coated, and the 2-(b) sensor is coated.

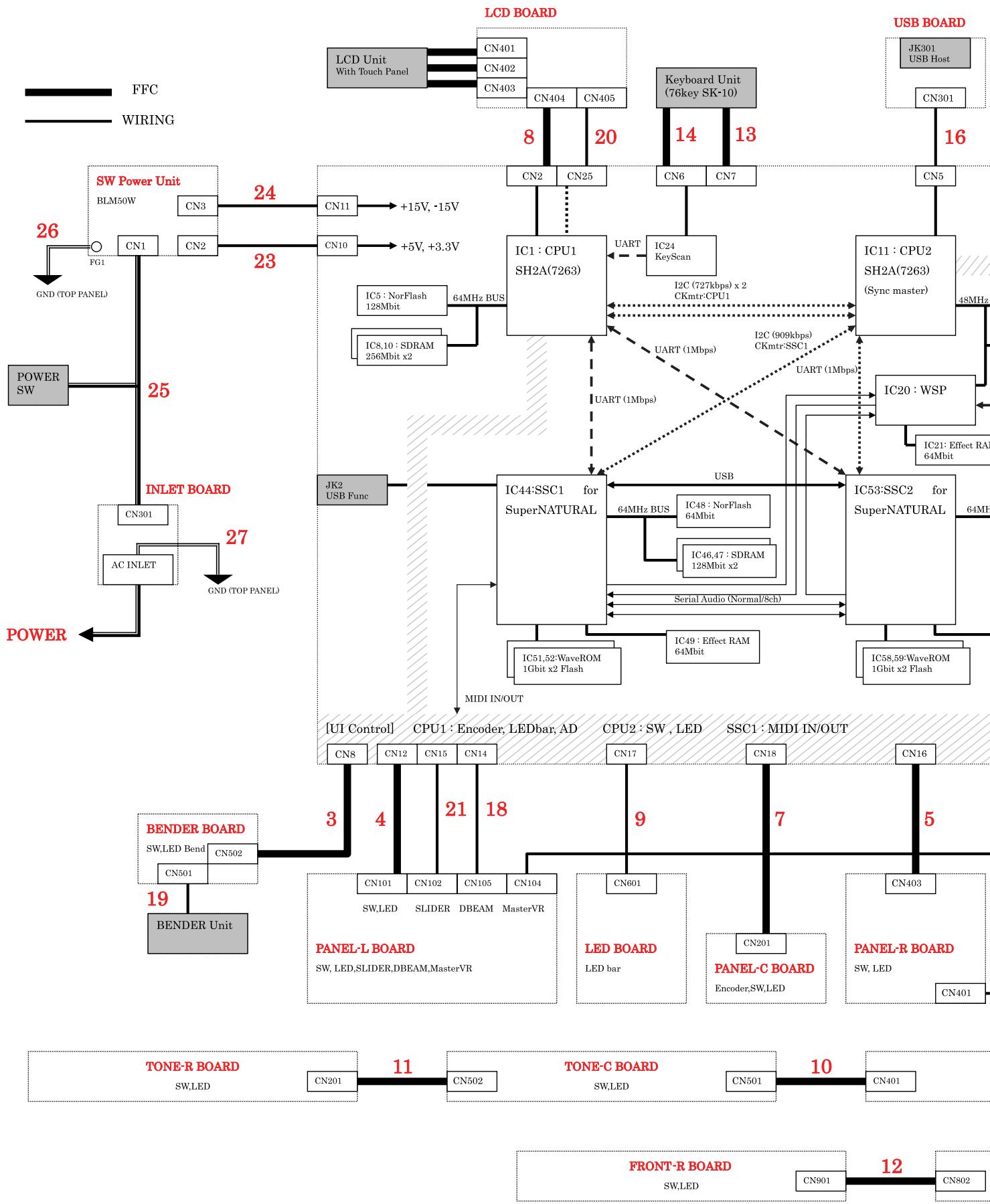


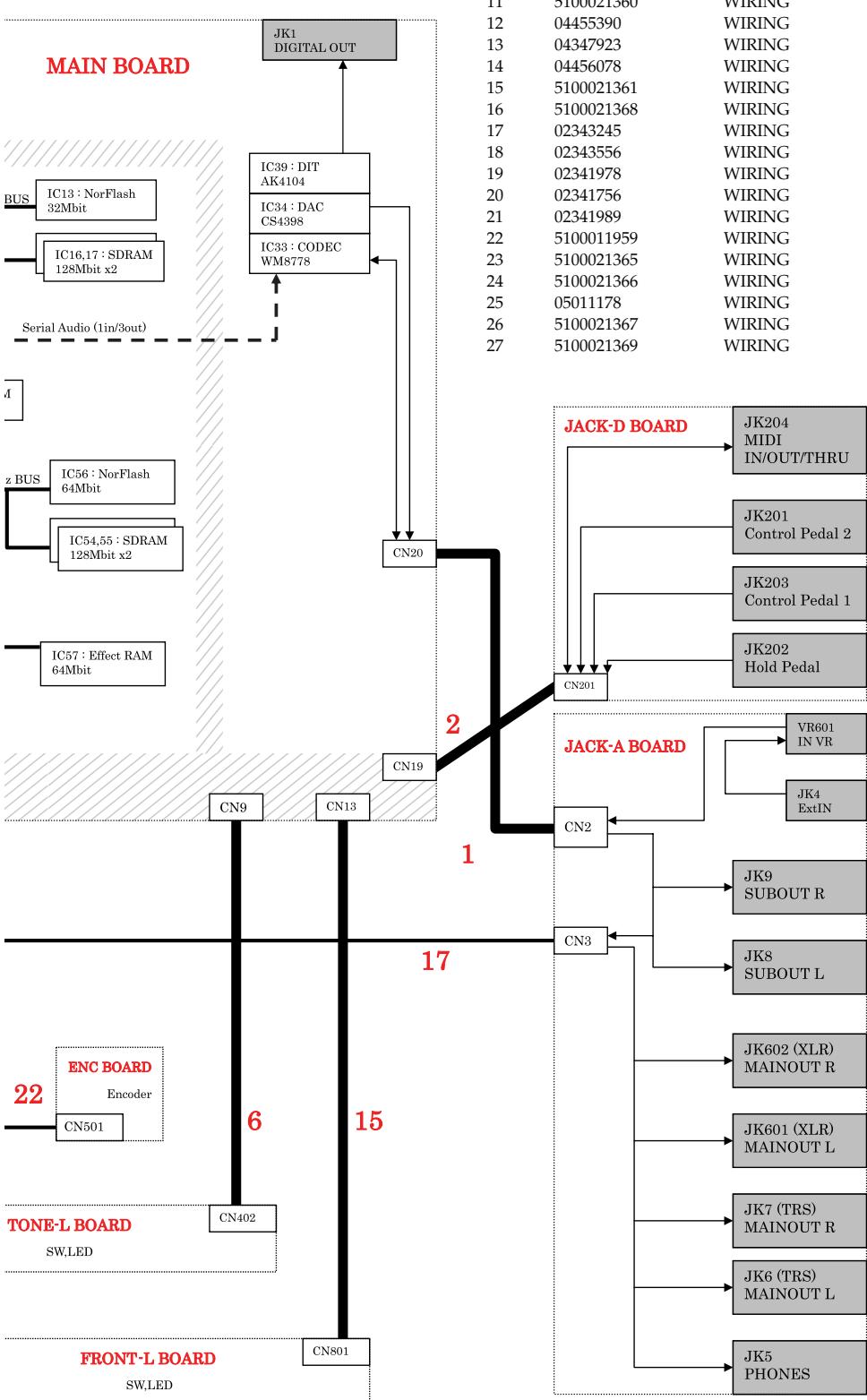
- As shown in the figure below, insert the sensor into the HI board's connector and secure it with filament tape.

* Avoid covering the board's filter with the filament tape.



Wiring Diagram/Block Diagram





No.	Part Code	Part Name	Description	Q'ty
1	5100021351	WIRING	20624 FWR-P=1.00-K1-22-50	1
2	04455423	WIRING	20624 FWR-P=1.00-K1-10-50	1
3	5100021355	WIRING	20624 FWR-P=1.25-K1-10-270	1
4	5100021356	WIRING	20624 FWR-P=1.25-K1-28-250	1
5	5100021357	WIRING	20624 FWR-P=1.25-K1-24-500	1
6	04890245	WIRING	FWR-P=1.00-K-28-80	1
7	5100014758	WIRING	20624 FWR-P=1.25-K1-14-120	1
8	5100021358	WIRING	20624 SFWR-P=0.50-K1-40-240	1
9	05121201	WIRING	20624 FWR-P=1.00-K1-12-100	1
10	5100021359	WIRING	20624 FWR-P=1.00-K1-20-200	1
11	5100021360	WIRING	20624 FWR-P=1.00-K1-12-180	1
12	04455390	WIRING	FWR-P=1.00-K-16-100	1
13	04347923	WIRING	FWR-P=1.25-K-22-550	1
14	04456078	WIRING	FWR-P=1.25-K-16-450	1
15	5100021361	WIRING	20624 FWR-P=1.00-K1-14-340	1
16	5100021368	WIRING	W1 (USB)	1
17	02343245	WIRING	6X200-P2.0-PHR-PHR-F	1
18	02343556	WIRING	8X200-P2.0-PHR-PHR-F	1
19	02341978	WIRING	4X100-P2.0-PHR-PHR-F	1
20	02341756	WIRING	3X200-P2.0-PHR-PHR-F	1
21	02341989	WIRING	4X150-P2.0-PHR-PHR-F	1
22	5100011959	WIRING	3X80-P2.0-PHR-PHR-F	1
23	5100021365	WIRING	1015#18 6X640-VHR-VHR-F	1
24	5100021366	WIRING	1007#22 3X750-XHP-XHP-F	1
25	05011178	WIRING	W1	1
26	5100021367	WIRING	1015#16 SPIRAL200-LUG-LUG	1
27	5100021369	WIRING	W2 (INLET)	1

Parts List

Safety Precautions:
The parts marked  have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons, parts with parts code ***** cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

Note: The parts marked # are new. (initial parts) The description "Q'ty" means a necessary number of the parts per one product.

CASING

#	5100017578	TOP PANEL	1
#	5100020228	LCD ESCT	1
#	5100020224	SIDE PANEL L	1
#	5100020225	SIDE PANEL R	1
	04892967	BENDER PANEL	1000-592-1(411-592-5)
	04892978	END BLOCK	1
#	5100020227	BLIND	1
#	5100020226	BOTTOM BOARD	1

CHASSIS

	5100004025	END BLOCK HOLDER L	1
	5100004026	END BLOCK HOLDER R	1
	04566401	KBD HOLDER	1
#	5100020231	LCD HOLDER	1
#	5100020235	PANEL ANGLE L	1
#	5100020236	PANEL ANGLE R	1
	04566378	PANEL PWB HOLDER	5
#	04902678	POWER SUPPLY HOLDER	1
#	5100020232	PWB ANGLE	2
#	5100020233	PWB HOLDER MAIN	1
#	5100020237	SIDE ANGLE	2
	01786045	SW HOLDER	AT-217K

KNOB, BUTTON

#	5100020241	RUBBER SW	1H-A	1
#	5100020242	RUBBER SW	1H-B	1
#	5100020243	RUBBER SW	1H-C	1
#	5100020238	RUBBER SW	4H-A	1
#	5100020239	RUBBER SW	4H-B	1
#	5100020240	RUBBER SW	4H-C	1
#	5100023704	RUBBER SW	1H-A RED	1
#	5100023710	RUBBER SW	2H-A GRN	1
#	5100023706	RUBBER SW	2H-A ORN	2
#	5100023705	RUBBER SW	2H-A PUR	2
#	5100023707	RUBBER SW	2H-A YEL	2
#	5100023712	RUBBER SW	3H-A BLU	1
#	5100023711	RUBBER SW	3H-A GRN	1
#	5100023709	RUBBER SW	3H-A WHT	1
#	5100023708	RUBBER SW	3H-A YEG	1
	04566445	KEYTOP	ZE CURSOR KEY A	1
	04566456	KEYTOP	ZE CURSOR KEY B	1
	22495278	D S-KEYTOP	MD2H BLK (W/WINDOW)	1
	02016445	Y S-KEYTOP	LD1H BLK	8
	02016456	Y S-KEYTOP	LD2H BLK	1
	02016501	Y S-KEYTOP	LD2H MCG	1
#	5100020256	Y S-KEYTOP	LD3H BLK	2
	02010434	Y S-KEYTOP	LD4H BLK	1
	02016390	Y S-KEYTOP	LX1H BLK	3
	02011412	Y S-KEYTOP	SD1H BLK	5
	04018056	Y S-KEYTOP	SD1H MCG	1 included in Panel-C, 2 included in Panel-R, 1 included in Tone-L, 1 included in Tone-R Board
	02011456	Y S-KEYTOP	SX1H BLK	1 included in Tone-C, 2 included in Tone-R Board
	5100016996	M R-KNOB	LF BLK MNP	1 included in Panel-C, 5 included in Panel-R Board
#	5100020679	M R-KNOB	KF-ELA BLK/LCG	4
	04565478	KNOB	ZE R-KNOB LF	1
	22485295	D S-KNOB	S BLK/LCG	1
				4

SWITCH			
	01340290	TACT SWITCH	EVQ11A H=5.0
	13169711	TACT SWITCH	SKPDALD010
	02781634	TACT SWITCH	SKRGAED010
△	01786012	SEESAW SWITCH	JW-M11RKK
			12 25 4 1
JACK, EXT TERMINAL			
	04452945	3.5MM JACK	YKB21-5344N
	13449275	6.5MM JACK	YKB21-5074
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)
#	13429273	MIDI CONNECTOR	YKF51-5046 (TRIPRET)
#	5100019749	RCA CONNECTOR	LPR6521-1301FC
	03897089	USB CONNECTOR A TYPE FEMALE	YKF45-0031N
	5100009531	USB CONNECTOR B TYPE FEMALE	YKF45-0044N
	5100004097	XLR CONNECTOR	NC3MAH-0 NEW-A V1
			1 7 1 1 1 1 1 1 2
DISPLAY UNIT			
#	5100016526	LCD	LQ070Y3DG3B
			1
POWER SUPPLY UNIT			
△	5100005906	SWTNG REG	RLM50W REV.B
			1
SPEAKER, BUZZER			
	03900712	SPEAKER	TWEETER PKM13EPYH4002-B0
			1
KEYBOARD ASSY			
	5100001544	KEYBOARD ASSY FOR SERVICE	SK-1076-C
			1
PWB ASSY			
#	5100020030	MAIN BOARD ASSY	
#	5100020031	JACK SHEET ASSY <i>* This unit includes the following parts.</i>	
#	*****	JACK-A BOARD	1
#	*****	JACK-D BOARD	1
#	*****	LCD BOARD	1
#	*****	ENC BOARD	1
#	*****	INLET BOARD	1
#	5100020032	PANEL SHEET ASSY <i>* This unit includes the following parts.</i>	
#	*****	PANEL-L BOARD	1
#	*****	PANEL-C BOARD	1
#	*****	PANEL-R BOARD	1
#	*****	BENDER BOARD	1
#	5100020033	PANEL SW SHEET ASSY <i>* This unit includes the following parts.</i>	
#	*****	TONE-L BOARD	1
#	*****	TONE-C BOARD	1
#	*****	TONE-R BOARD	1
#	*****	FRONT-L BOARD	1
#	*****	FRONT-R BOARD	1
#	*****	LED BOARD	1
#	*****	USB BOARD	1
DIODE			
	01900612	DIODE	TPS611(F)
#	03788578	LED	DD-12HWB (H/I RANK)
#	5100019994	LED	SDFB04002B1-A
#	5100019995	LED	SDFG04002A1-A
	02125167	LED	SLI-343DCT32W
	01787045	LED (ORANGE)	SLR-325DCT31
	03904323	LED (BLUE)	SLR-343BCTT32
	01239867	LED (RED/GREEN)CLR	SML72423C TP15
	04902023	LED (RED/GREEN)	SPI-325MUWT31
	03126134	LED (INFRARED)	TLN233(F)
#	5100019648	LED	TLOK1100C(T11)
	03565423	LED	TLOU1002A(T02)
	03565423	LED	TLOU1002A(T02)
#	5100019647	LED	TLRMK1100C(T11)
	03459534	LED (RED)	TLSU1002A(T02)
#	5100019378	LED	TLWF1100C(T11)
			1 4 3 3 24 2 1 1 1 4 7 7 1 1 1 16

POTENTIOMETER			
	02781390	9M/M ROTARY POTENTIOMETER	RK09K12A0D0S 20KAX2
	13289189	POTENTIOMETER	RK14K1240A2D L1=15 50KBX2
	01905467	ROTARY ENCODER	EVE GC1 F20 24B
	04897256	SLIDE POTENTIOMETER	RS45111-0A10-C0-P1-B103
FUSE, FUSE HOLDER			
#	△	5100003343	FUSE
#	△	5100019756	FUSE
WIRING, CABLE			
#	△	5100021366	WIRING
#	△	5100021367	WIRING
#		5100021365	WIRING
		04455423	WIRING
		05121201	WIRING
#		5100021360	WIRING
#		5100021361	WIRING
#		5100021359	WIRING
#		5100021351	WIRING
#		5100021355	WIRING
		5100014758	WIRING
#		5100021357	WIRING
#		5100021356	WIRING
#		5100021358	WIRING
		02341756	WIRING
#		5100011959	WIRING
		02341978	WIRING
		02341989	WIRING
		02343245	WIRING
		02343556	WIRING
		04455390	WIRING
		04890245	WIRING
		04456078	WIRING
		04347923	WIRING
△		05011178	WIRING
#		5100021368	WIRING
#	△	5100021369	WIRING
TRANSFORMER			
	02563501	PULSE TRANS	PT-10 (2280-T008)
SCREWS			
	40017934	SCREW M3X6	PAN MACHINE W/SW+PW(L) FE ZC
	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC
	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC
	40233012	SCREW 2.6X8	BINDING TAPTITE P BZC
	40011056	SCREW 3X6	BINDING TAPTITE B ZC
	40011101	SCREW 3X8	BINDING TAPTITE B ZC
	40011067	SCREW 3X8	BINDING TAPTITE B FE ZC
	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC
	40019123	SCREW 3X8	BINDING TAPTITE S BZC
	40012256	SCREW 3X10	BINDING TAPTITE B FE ZC
	40010734	SCREW 3X12	BINDING TAPPING A FE ZC
	40127545	SCREW 4X10	TRUSS TAPPING A FE BZC
	40346289	SCREW 4X12	OVAL HEAD TAPTITE B NI
	40342456	SCREW 4X16	PAN WASHER HEAD TAPTITE B BZC
	40011123	SCREW 4X8	BINDING TAPTITE B FE BZC
	40238501	SCREW 4X8	BINDING TAPTITE P FE BZC
	40010645	SCREW 4X8	TRUSS TAPPING A FE BZC
	40011745	HEX NUT M4	FE ZC
	40560723	STANDOFF	M3-L5.5-H10
MISCELLANEOUS			
	03234723	BENDER	PB-H0204
	5100001159	SUB-ASSY USB BOX GW-8 (LF)	(990-07040-10-04)
	01343089	ESCU TCHEON	D-BEAM CONTROLLER ESCT BLK
#	5100020229	D S-ESCT	SX4H-C L=45 BLK
#	5100020244	ESCU TCHEON	1H
#	5100020245	ESCU TCHEON	2H
#	5100020325	ESCU TCHEON	3H
	05010278	KEYTOP COVER	
#	5100020230	LED COVER	
#	5100021485	POT DUST COVER	
	12359105	RUBBER FOOT W	RS-09 235-105
	05012101	CLAMP	RFC-21V0
#	5100021495	LOCKING CLAMP	RLWC-3SV0

MISCELLANEOUS

	40017378	COATING CLIP	CS-7	3
	40016512	INSULOK TIE	80M/M T-18S	9
	40232134	ACETATE TAPE	NITTO #5 BLACK W5MM 20M	-
	40122556	DOUBLE FACED ADHESIVE TAPE	#575X W30MM 30M 10P 30CM	-
	40567623	DOUBLE-FACED TAPE	#575 W15MM 30M	-
	40122434	DOUBLE-FACED TAPE	#500 W7MM 20M 30P	-
	40122490	DOUBLE-FACED TAPE	#500 W5MM 20M 40P	-
#	5100020955	LCD TAPE		2
#	5100021599	FC SHEET		1
#	5100019999	FERRITE-CORE	ESD-FPL-35-8	2
	05011956	FERRITE-CORE ESD-FPL-27-8		1
	12199584	GROUNDING TERMINAL	M1698	5
	01455523	CORD BUSHING	EDS-1717U	1
	5100005712	BOTTOM CUSHION		2
#	5100020246	LCD CUSHION		3
	12169368	LED SPACER	LDS-40B	1
	02230578	LED SPACER	LDS-50R	1
△	40013812	CAUTION SEAL	IEC #142	1
△	5100005900	SEAL	IEC GND SEAL #5017 (W)	2
#	△ 5100021415	STAND CAUTION LABEL		1
	17041858	GREASE FOR KEY	MOLYKOTE G-1039 (50 GRAM)	6
	17049543	GREASE FOR KEY	FLOIL G-336A WHITE (93 GRAM)	10

ACCESSORIES (Standard)

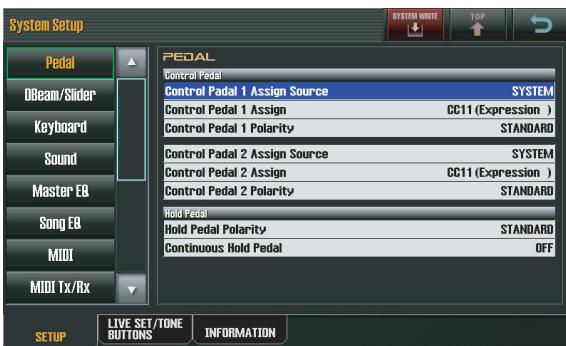
	5100005713	USB BOX PROTECTOR		1
	40017412	CORD BINDER	NO.11 BLACK	1
	03236623	HEXAGON WRENCH (2.5MM)		1
	5100005932	SCREW M3X8	HEXSOCKETCAP FLAT WASHER BZC	1
△	03340956	AC CORD SET PSE	100V YA-101/YP-3NB/YC-13	1
△	5100012292	AC CORD SET	117VBL 2.5M 3P DAIKEI 117VBL	1
△	00894378	AC CORD SET	120V SP301+IS14 SJT18/3	1
△	03450323	AC CORD SET	220V YP-36 YC-13D	1
△	00894389	AC CORD SET	230V SP22+IS14 H05VV-F3G1.0	1
△	00907001	AC CORD SET	240VE SP-60+IS-14	1
△	5100013842	AC CORD SET	240VA 2.5M SAA HIRAKAWA	1
#	5100020681	OWNER'S MANUAL	JAPANESE	1
#	5100020682	OWNER'S MANUAL	ENGLISH	1

Verifying the Version

1. Switch on the power to the unit.
2. Press [MENU].
The **MENU** screen appears.



3. Touch **System**.
The **System Setup** screen appears.



4. Touch **INFORMATION**.
The **System Information** screen appears.
5. Touch **Version**.
The version information is displayed.



Data Backup and Restore Operations

Item Required

- USB memory device (256 MB or larger; recommended: M-UF2G)

Formatting the USB Memory Device

1. Connect the USB memory device to the **USB MEMORY** connector at the left edge of the Top Panel.
 2. Press [MENU].
The **MENU** screen appears.
 3. Touch **Format USB Memory**.
The **Format USB Memory** screen appears.
 4. Touch **EXEC**.
A confirmation message is displayed.
 5. To execute formatting, touch **OK**. To quit, touch **EXIT**.
- * Never switch off the power during formatting.

When the message **USB MEMORY Format Completed!** appears, the operation has finished.

6. Touch **OK**.

Backup Procedure

- * Never switch off the power to the unit before the operation finishes. Doing so may result in data corruption.
1. As described in **Formatting the USB Memory Device** (p. 40), connect the USB memory device to the **USB MEMORY** connector at the left edge of the Top Panel.
 2. Press [MENU].
The **MENU** screen appears.
 3. Touch **Backup**.
The **Backup** screen appears.
 4. Touch **EXEC**.
A confirmation message is displayed.
 5. To execute the backup, touch **OK**. To quit, touch **EXIT**.
When the message **Backup Completed!** is displayed, the operation has finished.
The time required for the backup is approximately 1 minute.
 6. Touch **OK**.

Restore-operation Procedure

- * Never switch off the power to the unit before the operation finishes. Doing so may result in data corruption.
1. Connect the USB memory device containing the backed-up data to the **USB MEMORY** connector.
 2. Press [MENU].
The **MENU** screen appears.
 3. Touch **Restore**.
The **Restore** screen appears.
 4. Touch **EXEC**.
A confirmation message is displayed.
 5. To execute the restore operation, touch **OK**. To quit, touch **EXIT**.
When the message **Completed. Please Power off!** appears, the operation has finished.
 6. Switch off the power.

Performing a Factory Reset

* Executing a factory reset causes all user data in the unit to be lost. Before you start, refer to **Data Backup and Restore Operations** (p. 40) and back up the user data.

1. Press [MENU].
The **MENU** screen appears.
 2. Touch **Factory Reset**.
The **Factory Reset** screen appears.
 3. Touch **EXEC**.
A confirmation message is displayed.
 4. To execute the factory reset, touch **OK**. To quit, touch **EXIT**.
- * The factory reset takes several minutes to finish. Be sure never to switch off the power before the operation finishes.
- When the message **Completed. Please Power off!** appears, the operation has finished.
5. Switch off the power.

Updating the System

Items Required

- Computer
- USB memory device (256 MB or larger; recommended: M-UF2G)
- Update-use file (obtained via Service Net)

Procedure

- * Never switch off the power to the unit before the operation finishes. Doing so may result in data corruption.
1. Format the USB memory device according to **Formatting the USB Memory Device** (p. 40).
 2. Copy the update-use file (**jp80_up.bin**) to the root directory of the USB memory device.
 3. Make sure the unit's power is switched off, then connect the USB memory device to the **USB MEMORY** connector at the left edge of the Top Panel.
 4. Hold down the **TEMPO** button and switch on the power.
 5. When the message **Update Mode** appears, release the button.
The update starts.
- * The update process takes several minutes to finish. Be sure never to switch off the power before the operation finishes.

When the message **update finished.** is displayed, the operation has finished.

6. Switch off the power.
7. Detach the USB memory device, then switch on the power to the unit and verify that the version has been updated.

Test Mode

Items Required

- USB memory device (256 MB or larger; recommended: M-UF2G)
- Computer running Windows (operating system: XP, Vista or 7)
- Expression pedal
- MIDI cable
- USB cable
- Audio cable
- Coaxial cable
- Signal generator
- Oscilloscope
- Noise meter
- Speakers (MA-10D, MA-15D, or other speakers equipped with coaxial input connectors)
- Headphones
- MIDI keyboard and MIDI sound module
- Touch pen (#00900545)

Preparations for Testing

Before starting testing, make sure that the unit's power is not on.

1. Connect the USB memory device to the **USB MEMORY** connector at the left edge of the Top Panel.
2. Set **VOLUME** to **MAX**.
3. Set **AUDIO IN LEVEL** (rear panel) to **MAX**.

Entering the Test Mode

Hold down **MENU** and **PERC** and switch on the power.

Quitting the Test Mode

Switch off the power.

Skipping Test Items

- SHIFT + ► :** This forces execution to advance to the next test item.
SHIFT + ◀ : This forces execution to return to the previous test item.
SHIFT + EXIT: This forces execution to return to **1. VERSION CHECK**.

* After performing these operations, the screen takes one to two seconds to change.
Press only once, and not multiple times.

Test Items

1. VERSION CHECK (p. 42)
2. DEVICE (p. 42)
3. OUTPUT (XLR) (p. 42)
4. OUTPUT (TRS) (p. 43)
5. SUB OUT (p. 43)
6. PHONES (p. 43)
7. DIGITAL OUT (p. 43)
8. MIDI THRU (p. 44)
9. MIDI IN/OUT (p. 44)
10. AUDIO IN (p. 44)
11. MUTE (p. 44)
12. LCD (p. 45)
13. TOUCH-PANEL ADJUST (p. 45)
14. TOUCH-PANEL CHECK (p. 45)
15. BEEP (p. 45)
16. SW (p. 45)
17. SW/LED (p. 46)
18. A/D (p. 46)
19. ENCODER (p. 47)
20. D BEAM ADJUST (p. 47)
21. D BEAM CHECK (p. 47)
22. PEDAL (p. 47)
23. D/A NOISE (p. 48)
24. WAVE CHECK SUM (p. 48)
25. KEYBOARD (p. 48)
26. SHOCK TEST (p. 48)
27. FACTORY RESET (p. 48)
28. USB COMPUTER (Tested in Normal Mode) (p. 49)

1. VERSION CHECK

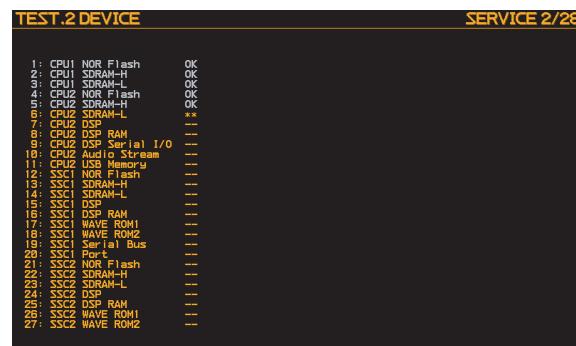
This verifies the version of the main program.



Press ► to advance to the next test item.

2. DEVICE

This automatically tests various devices.



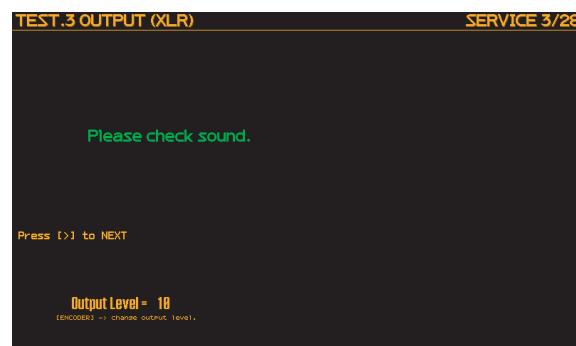
If all results are **OK** (acceptable), execution automatically advances to the next test item.

If a problem occurs, **NG** ("not OK") is displayed and the location of the problem is noted. In this case, execution does not automatically advance to the next item.

If the message **11: CPU2 USB MEMORY NG** appears, check whether the USB memory device is connected correctly.

3. OUTPUT (XLR)

This verifies the audio signals output from the **MAIN OUT L** and **R** (XLR) connectors.



1. Connect the oscilloscope to the **MAIN OUT L** and **R** (XLR) connectors.
2. Verify that the following signals are output.
L: 600-Hz sine wave at 0.78 Vpp +/-15% (at both HOT and COLD)
R: 1,200-Hz sine wave at 0.78 Vpp +/-15% (at both HOT and COLD)
3. Press ► to advance to the next test item.

4. OUTPUT (TRS)

This verifies the audio signals output from the **MAIN OUTPUT L/MONO** and **R** connectors (1/4-inch phone jack).



1. Connect the oscilloscope to the **MAIN OUTPUT L/MONO** and **R** connectors (1/4-inch phone jacks).
2. Verify that the following signals are output.
L: 700-Hz sine wave at 0.87 Vpp +/-15% (at both TIP and SLEEVE)
R: 1,400-Hz sine wave at 0.87 Vpp +/-15% (at both TIP and SLEEVE)
** When measuring the L channel, insert a dummy plug into the R channel.*
3. Press ► to advance to the next test item.

5. SUB OUT

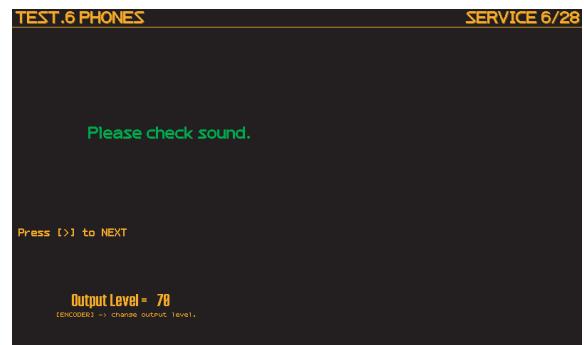
This verifies the audio signals output from the **SUB OUT L** and **R** connectors.



1. Connect the oscilloscope to the **SUB OUT L** and **R** connectors.
2. Verify that the following signals are output.
L: 800-Hz sine wave at 13.9 Vpp +/-15%
R: 1,600-Hz sine wave at 13.9 Vpp +/-15%
3. Press ► to advance to the next test item.

6. PHONES

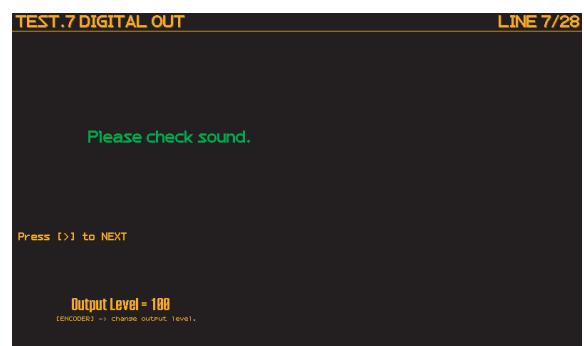
This verifies the audio signals (L and R) output from the **PHONES** connector.



1. Connect the oscilloscope to the **PHONES** connector.
2. Verify that the following signals are output.
L: 500-Hz sine wave at 14.4 Vpp +/-25%
R: 1,000-Hz sine wave at 14.4 Vpp +/-25%
3. Turn the **VOLUME** control, and verify that the output value changes in this sequence: **14.4 Vpp -> 0 Vpp -> 14.4 Vpp**.
4. Press ► to advance to the next test item.

7. DIGITAL OUT

This verifies the audio signals (L and R) output from the **DIGITAL AUDIO OUT** connector.



1. Connect the speakers to the **DIGITAL AUDIO OUT** connector.
A 440-Hz sine wave is output from the L channel, and an 880-Hz sine wave is output from the R channel.
2. Verify that no noise, drop-out, or clipping (distortion) is present.
3. Press ► to advance to the next test item.

8. MIDI THRU

This verifies the operation of the **MIDI THRU** connector.



1. Connect the MIDI keyboard to the **MIDI IN** connector.
2. Connect the MIDI sound module to the **MIDI THRU** connector.
3. Play the MIDI keyboard and verify that the MIDI sound module produces sound.
4. Disconnect the MIDI keyboard and the MIDI sound module.
5. Press ► to advance to the next test item.

9. MIDI IN/OUT

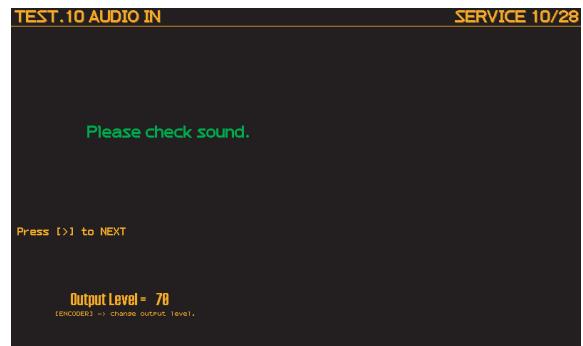
This verifies the operation of the **MIDI IN** and **MIDI OUT** connectors.



1. Using the MIDI cable, connect the **MIDI IN** and **MIDI OUT** connectors, and verify that **Status** changes to **Connect**.
2. When the MIDI cable is disconnected, execution automatically advances to the next test item.

10. AUDIO IN

This verifies audio signals (L and R) input to the **AUDIO IN** connector.



1. Connect the signal generator to the **AUDIO IN** connector and input the following signals.
L: 1,000-Hz sine wave at 2.5 Vpp
R: 1,000-Hz sine wave at 2.5 Vpp
2. Connect the oscilloscope to the **MAIN OUT L/MONO** and **R** connectors, and verify that the following signals are output.
L: 1,000-Hz sine wave at 4.5 Vpp +/-40%
R: 1,000-Hz sine wave at 4.5 Vpp +/-40%
3. Turn the **AUDIO IN LEVEL** control, and verify that the output value changes in this sequence: **4.5 Vpp -> 0 Vpp -> 4.5 Vpp**.
4. Press ► to advance to the next test item.

11. MUTE

This verifies muting operation.



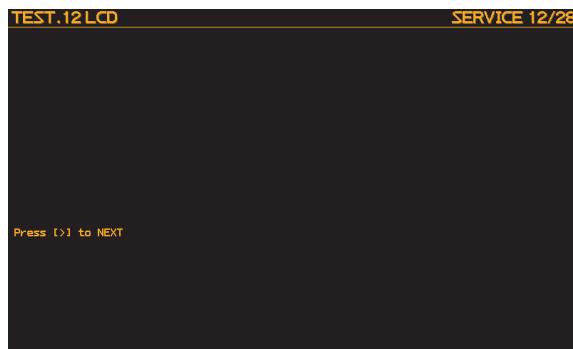
1. Connect the oscilloscope to the **PHONES** connector.
2. Verify that the waveform is muted while **OCTAVE DOWN** is pressed.
3. Press ► to advance to the next test item.

12. LCD

This verifies the display of the LCD screen.



1. Press **OCTAVE UP** to change the display on the LCD screen.
 2. At each screen, verify that the display is free of dot drop-out, uneven color, grime, soiling, and scratches.
- When all patterns have been finished, the screen shown below appears.



3. Press **▶** to advance to the next test item.

13. TOUCH-PANEL ADJUST

This performs adjustment of the positioning for the touch screen.



1. Using the touch pen (#00900545), touch the center of the "+" symbol inside the box ().
- When the touch is detected, the moves to the next point.
After all four points on the screen have been touched, execution automatically advances to the next test item.

14. TOUCH-PANEL CHECK

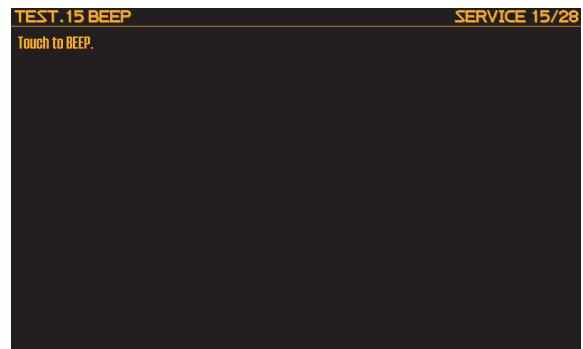
This verifies the operation of the touch screen.



1. Using the touch pen, touch the center of the "+" symbol inside the box ().
- When the touch is detected, the moves to the next point.
After all four points on the screen have been touched, if no problem occurs, execution automatically advances to the next test item.

15. BEEP

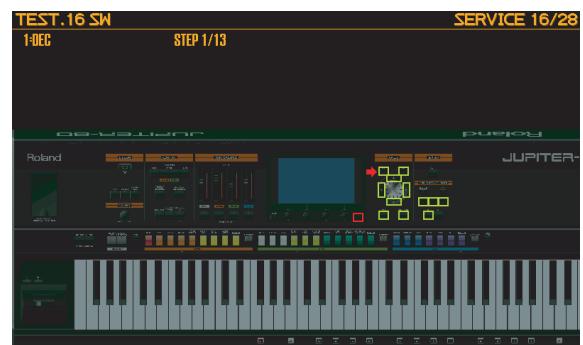
This performs verification of the audible beep.



1. Touch the LCD screen, and verify that a beep is sounded.
2. Press **▶** to advance to the next test item.

16. SW

This verifies the operation of switches that have no LEDs.



1. Press, in sequence, the buttons indicated by the red arrow on the LCD screen.
- When all have been pressed, execution automatically advances to the next test item.

17. SW/LED

This verifies the operation of LED-equipped switches.

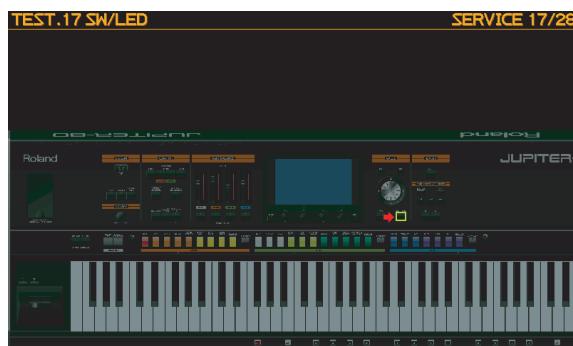


1. Verify that the button indicated by the red arrow on the LCD screen is illuminated on the panel.
2. Press the button and verify that the LED goes dark.
* The following buttons each use a two-color LED (red and green). To verify illumination of both colors, press each button twice.
PERC, LOWER, UPPER, SOLO, and ►
3. Verify that when the buttons shown below light up, they light up in the colors indicated in the following chart.



Button	Color
BASS	Red
PAD, CHOIR, STRINGS, and SYNTH STRINGS	Orange
BRASS, SYNTH BRASS, WOOD WINDS, and OTHER	Yellow
PIANO, E.PIANO, and CLAV	White
COMBO ORGAN, PIPE ORGAN, and THEATER ORGAN	Green
GUITAR, SYNTH LEAD, VIBES/MARIMBA, ACCORDION/HARMONICA, and OTHER	Aqua
VIOLIN, TRUMPET, and SAX	Blue
FLUTE, OBOE, BELL, and OTHER	Violet

4. After pressing **ENTER** to make **BASS** light up, continue with the verification procedure.



5. When verifying the buttons under the keyboard, verify that they are arranged in the sequence shown below.

From left: **WRITE, PREV SET, A, B, C, D, 1, 2, 3, 4, 5, 6, 7, 8, and NEXT SET**

When testing has finished, execution automatically advances to the next test item.

18. A/D

This verifies the operation of sliders, the pitch bender, and aftertouch.



First, perform verification for the sliders.

1. Lower the slider indicated on the LCD screen to its lowermost position, and verify that **0** is displayed.
2. Verify that the LED bar to the right of the slider lights up tracking the movement of the slider.
3. Raise the slider to its uppermost position, and verify that **127** is displayed.
If no problem is found, **OK** is displayed.
4. Perform verification in the same way for the other sliders (total of 4).

Next, perform verification for the pitch bender.

5. Flip the pitch bender to the left and verify that **0** is displayed, flip it to the right and verify that **127** is displayed, then return it to its original position and verify that **64** is displayed.
If no problem is found, **OK** is displayed.
6. Move the pitch bender all the way to the back, and verify that **127** is displayed.
If no problem is found, **OK** is displayed.

Next, perform verification for aftertouch.

7. Press any key deeply, and verify that **127** is displayed.
If no problem is found, **OK** is displayed and execution automatically advances to the next test item.

19. ENCODER

This verifies the operation of the encoders.



1. Rotate the control (encoder) indicated on the LCD screen counterclockwise 2 turns, and verify that **0** is displayed.
2. In the same way, rotate the control clockwise 2 turns, and verify that **48** is displayed.
3. Perform verification for the other controls in the same way.
When testing has finished, execution automatically advances to the next test item.

20. D BEAM ADJUST

This adjusts the sensitivity of the D Beam controller.



Set the sensitivity at 5 centimeters above the D Beam controller.

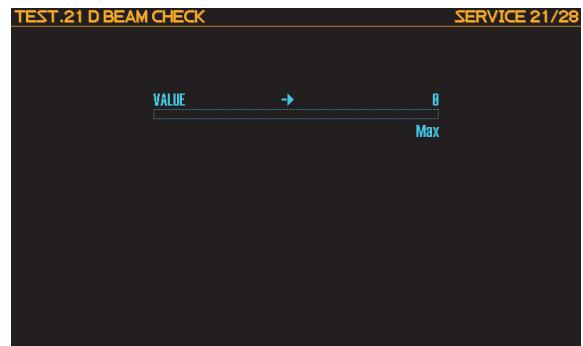
1. When **Low (5cm)** appears on the LCD screen, cover the D Beam controller with your hand at a distance of 5 centimeters and press **ENTER**.

Next, set the sensitivity at 40 centimeters above.

2. When **Hi (40cm)** appears on the LCD screen, cover the D Beam controller with your hand at a distance of 40 centimeters and press **ENTER**.
When adjustment ends, execution automatically advances to the next test item.

21. D BEAM CHECK

This verifies the operation of the D Beam controller.



1. Cover the D Beam controller with your hand, stopping at the position where **VALUE** reaches **0**.
2. Move the covering hand downward, and verify that **VALUE** reaches **127** when your hand is 5 centimeters from the panel surface.
3. Next, move the covering hand upward and verify that **VALUE** reaches **0** when your hand is 40 centimeters from the panel surface.

If no problem is found, execution automatically advances to the next test item.

22. PEDAL

This performs verification of expression-pedal operation.

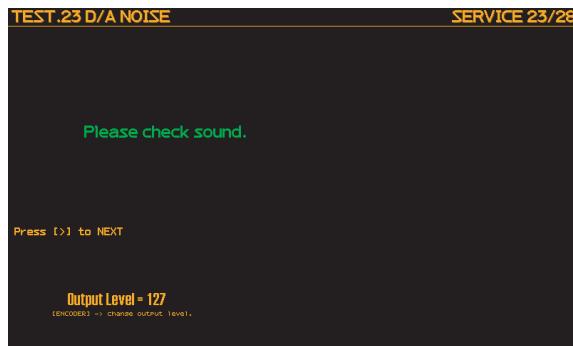


1. Connect the expression pedal to **FOOT PEDAL CTRL1**, then depress the toe and the heel.
If values from **0** to **127** are detected correctly, **OK** is displayed.
2. Connect the expression pedal to **FOOT PEDAL CTRL2**, then depress the toe and the heel.
If values from **0** to **127** are detected correctly, **OK** is displayed.
3. Connect the expression pedal to **FOOT PEDAL HOLD**, then depress the toe and the heel.
If values from **0** to **127** are detected correctly, **OK** is displayed.

If no problem is found, execution automatically advances to the next test item.

23. D/A NOISE

This measures residual noise.



1. Adjust the **VOLUME** control to **MAX**.
2. Connect the noise meter to the **MAIN OUT L/MONO** and **R** connectors (1/4-inch phone jacks), and verify that the values are at those shown below.
-86 dBm or less (DIN-Audio) or **-86 dBm** or less (JIS-A)
3. Connect the noise meter to the **SUB OUT L** and **R** connectors, and verify that the values are at those shown below.
-80 dBm or less (DIN-Audio) or **-80 dBm** (JIS-A)
4. Press ► to advance to the next test item.

24. WAVE CHECK SUM

This checks the entire area of the wave ROM.



1. Verify that all values displayed for **WAVE ROM** are **OK**.
* If **Busy** is displayed, wait for **OK** to be displayed. This can take up to 2 minutes.

When the check finishes, execution automatically advances to the next test item.

* This item is started after **2. DEVICE** (p. 42) has been executed. If **2. DEVICE** has been skipped, the message **Busy** remains displayed without changing.

25. KEYBOARD

This verifies the operation of the keyboard.



1. Connect the headphones or speakers.
2. Play all keys, and verify that notes are produced with piano sound. Also verify that the volume level changes according to the velocity with which the keyboard is played and that the note number and velocity values displayed on the LCD screen change.
3. Press **INC**.
4. Play all keys, and verify that notes are produced with organ sound.
5. Press **INC**.
6. Verify that no abnormal noise (scraping sound, unusual metallic sound, or the like) is produced when the keys are played.
7. Press ► to advance to the next test item.

26. SHOCK TEST

This test is not required at service sites.

Press ► to advance to the next test item.

27. FACTORY RESET

This performs a factory reset.



1. Press **ENTER**.
The factory reset starts.
When the message **Completed!** appears, the factory reset has finished.

This completes testing in the Test mode.

2. Switch off the power to the unit.

Next, carry out testing of the **USB COMPUTER** connector.

28. USB COMPUTER (Tested in Normal Mode)

1. Make sure the unit's power is switched off, then use a USB cable to connect a computer running Windows and the unit.

2. Switch on the power to the unit.

If No JUPITER-80 Driver Is Installed on the Computer

Verify that the message “**Found New Hardware. JUPITER-80**” appears on the computer’s screen, and the **Found New Hardware Wizard** starts.

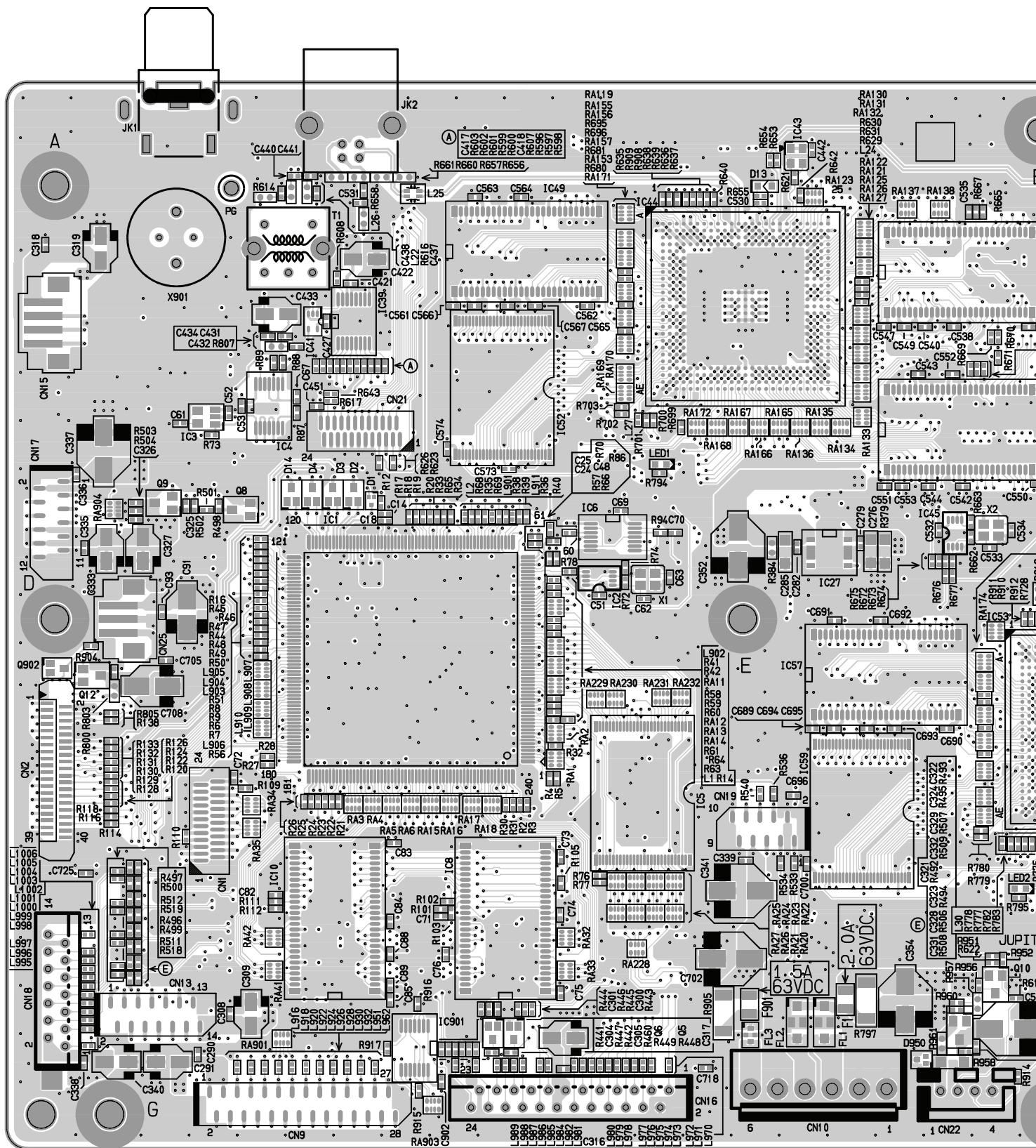
If the JUPITER-80 Driver Is Installed on the Computer

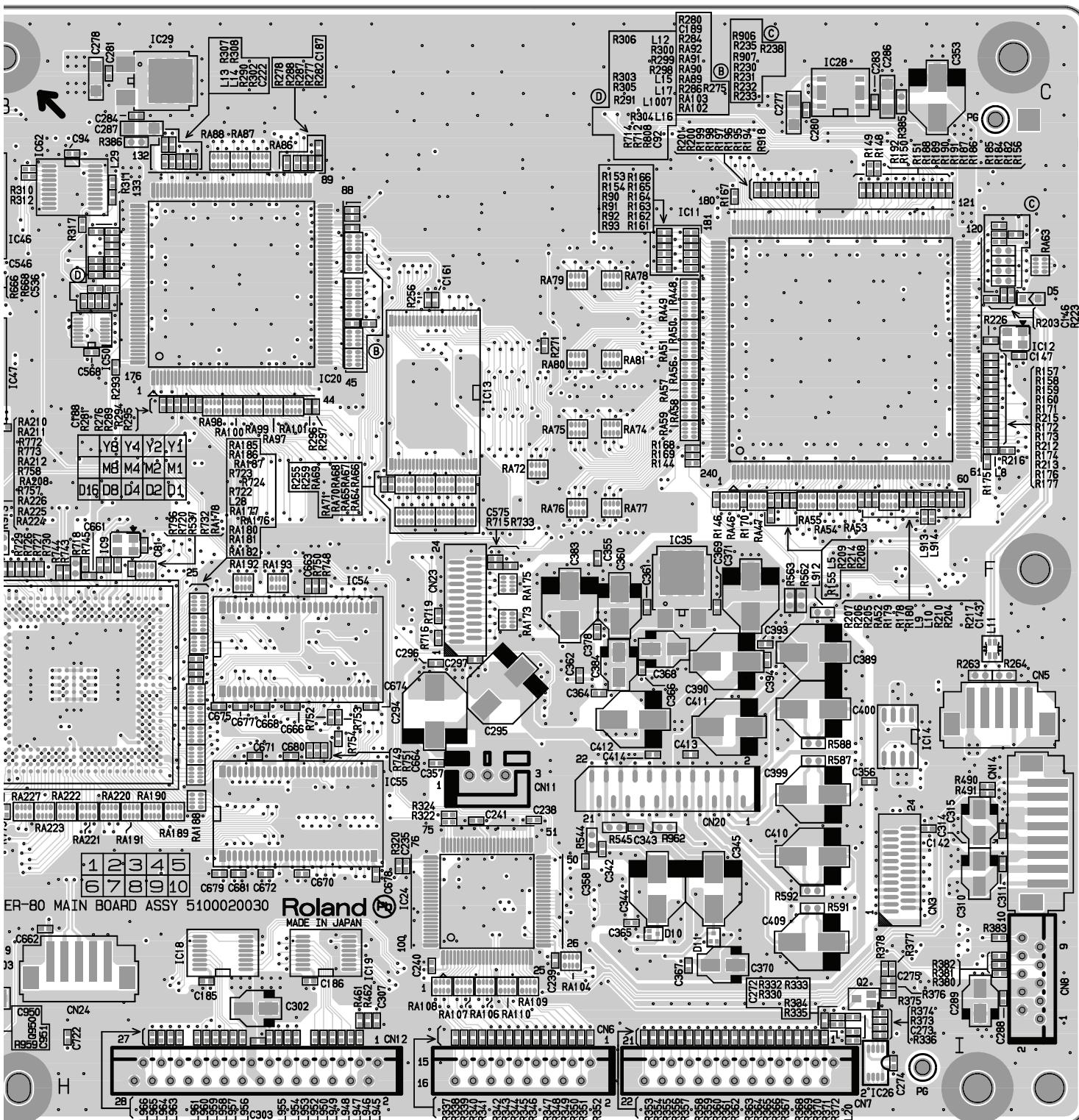
On the computer, at **Control Panel**, go to **Sounds and Audio Devices**, and verify that the JUPITER-80 is detected.

3. If no problem is found, switch off the power to the unit.

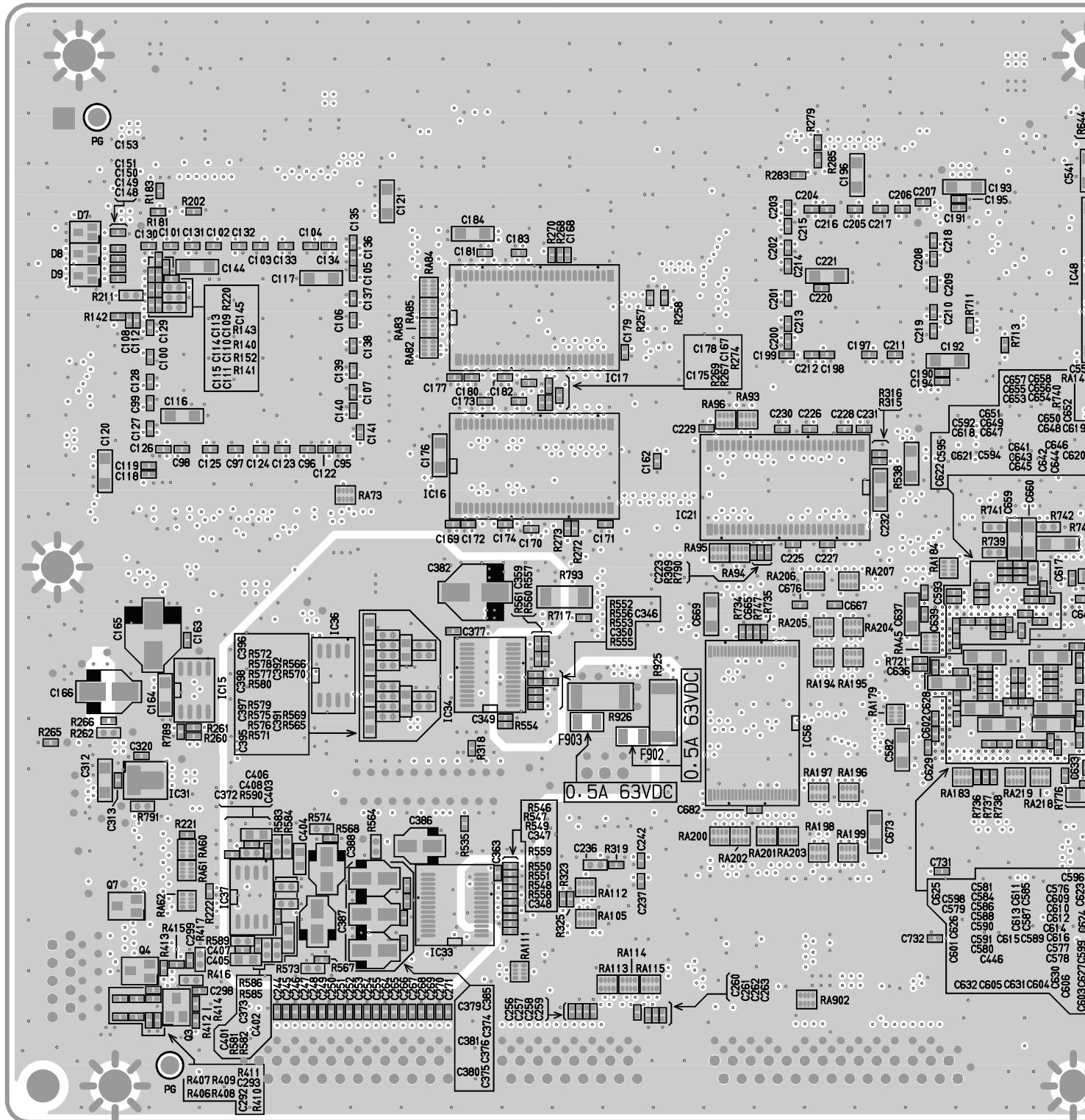
This completes all testing.

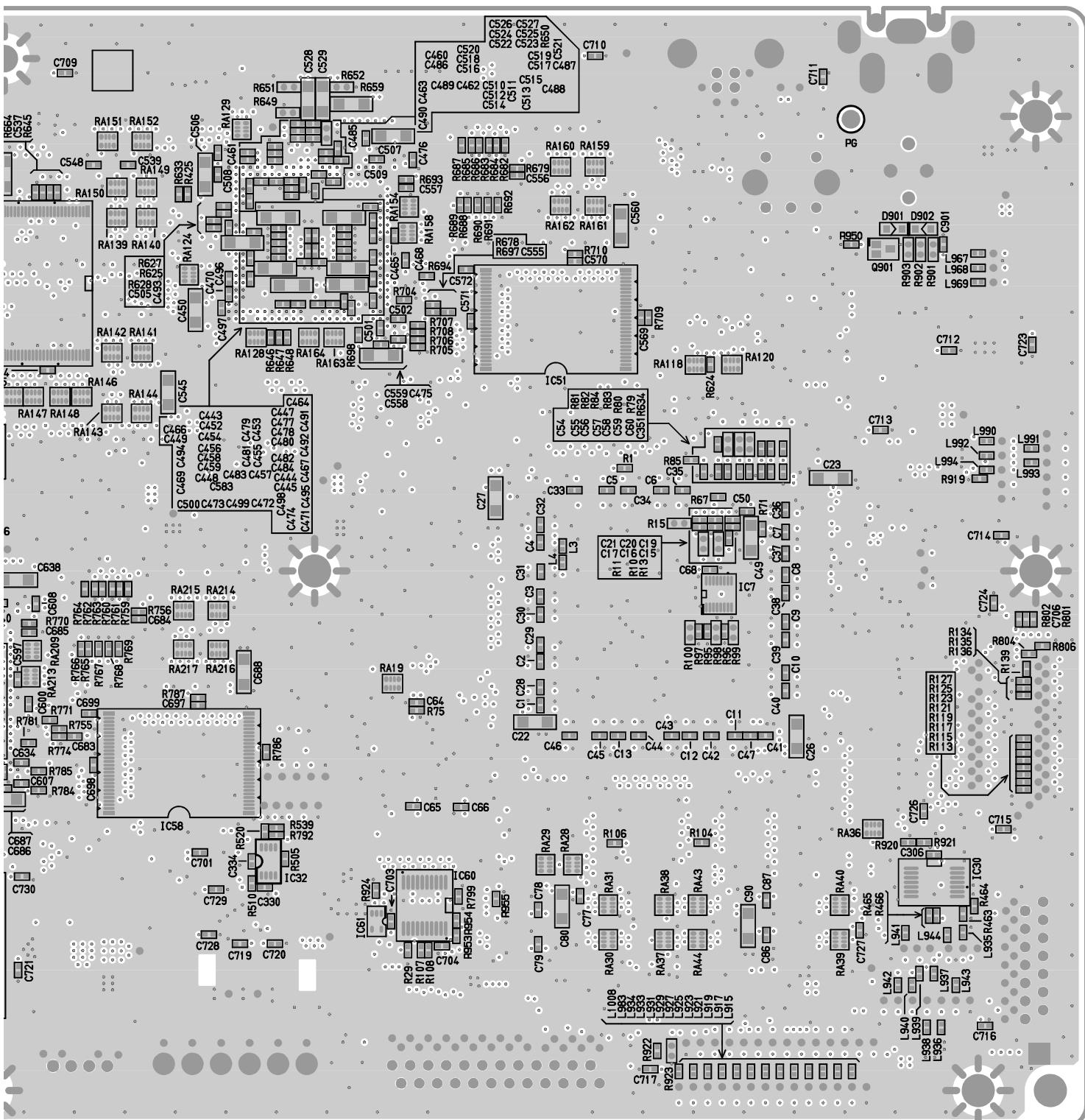
Circuit Board (Main Board: 1/2)



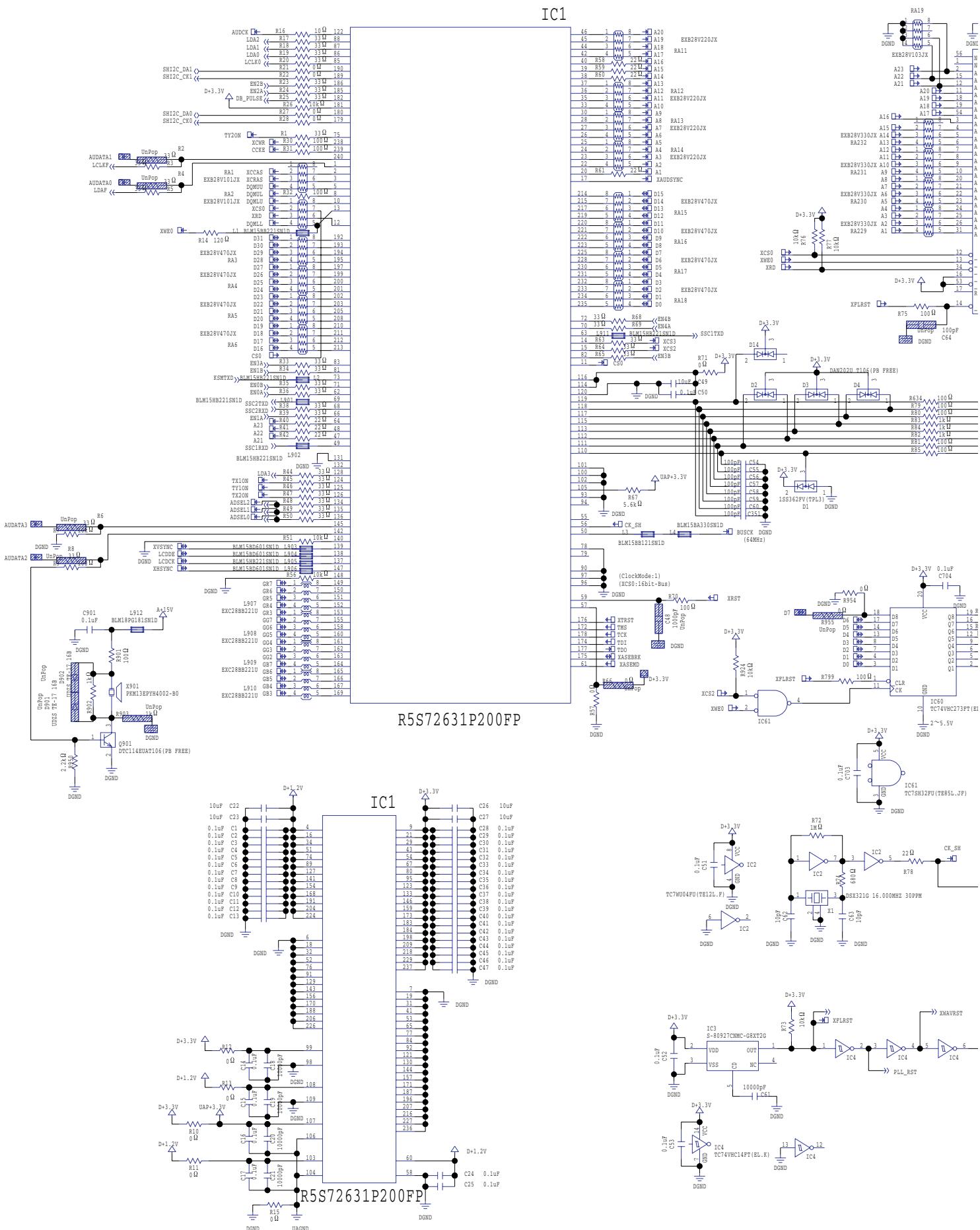


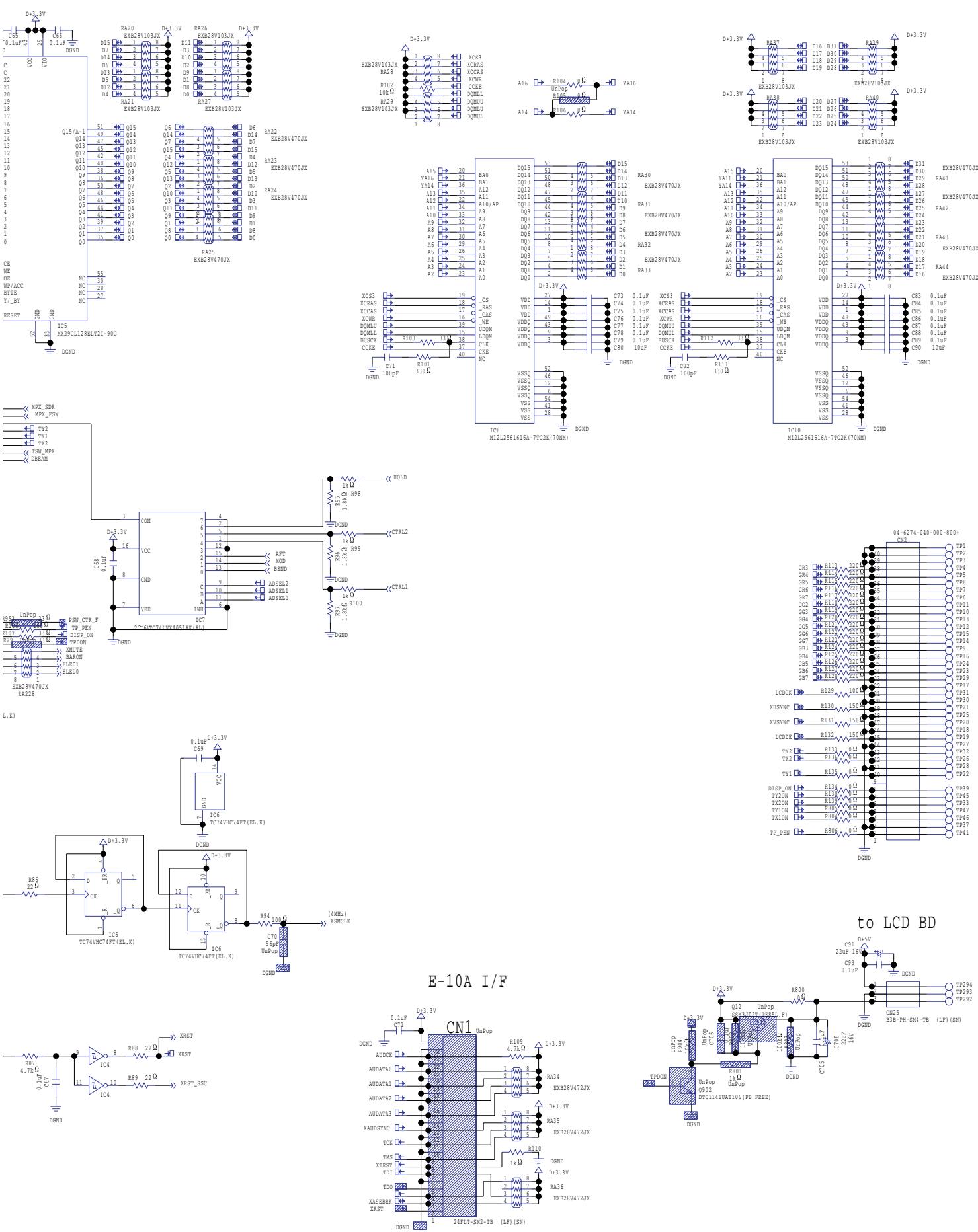
Circuit Board (Main Board: 2/2)



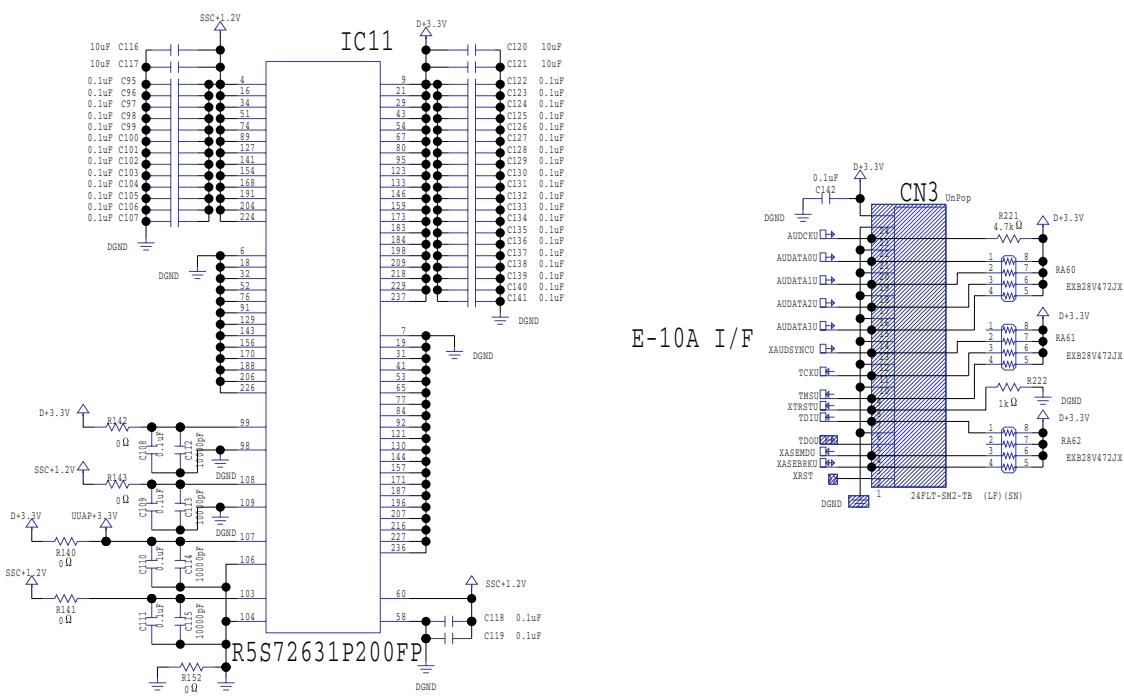
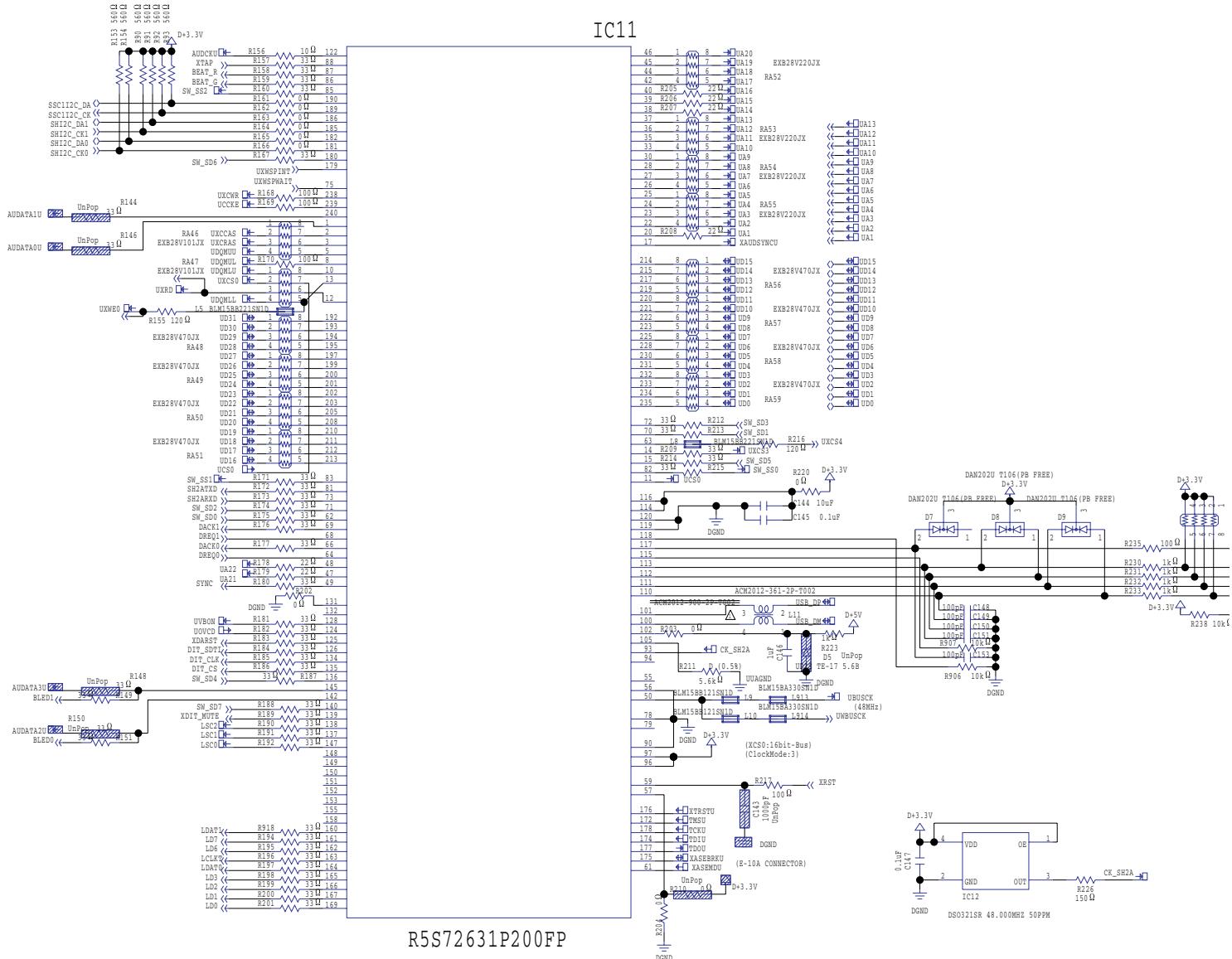


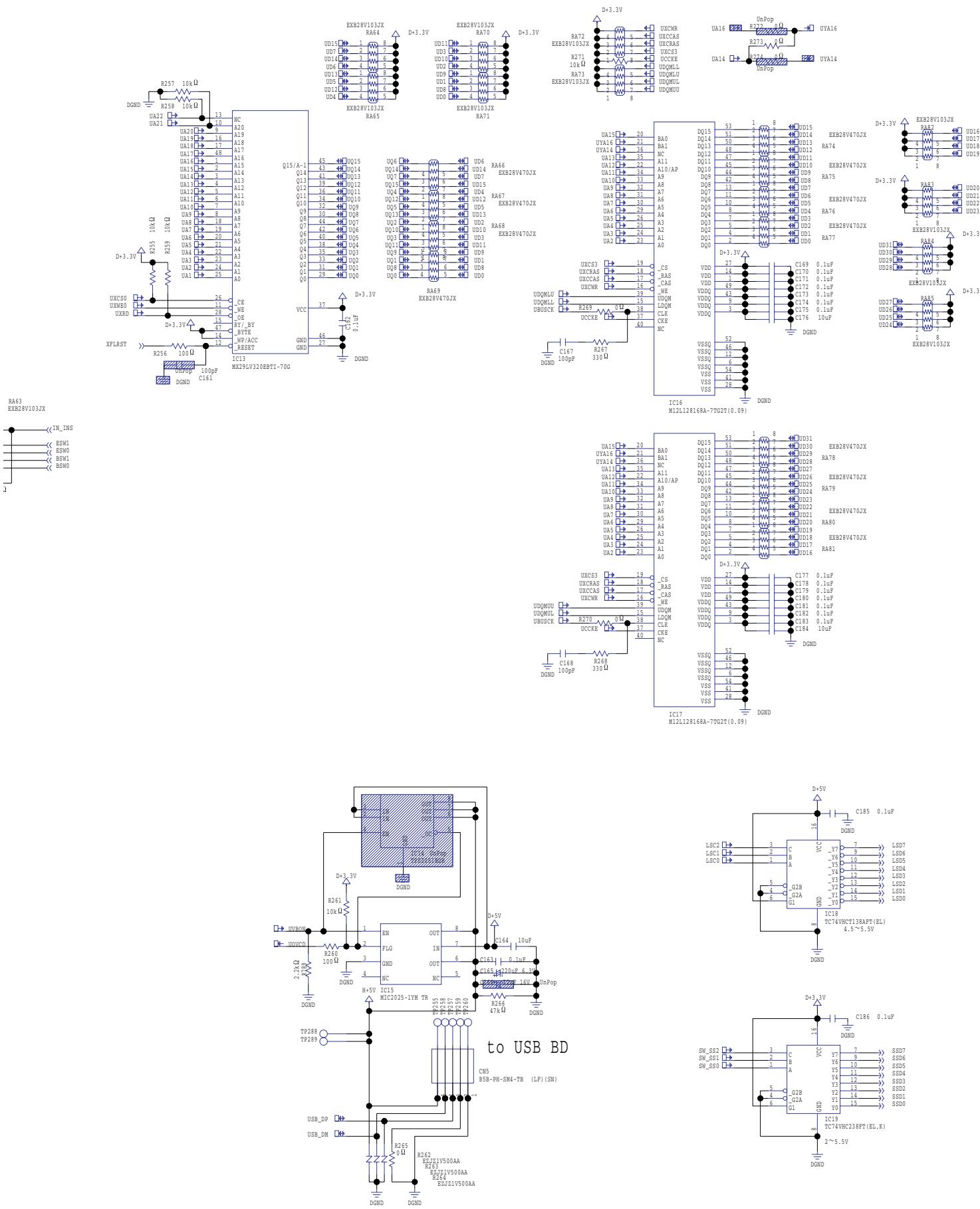
Circuit Diagram (Main Board: 1/7)



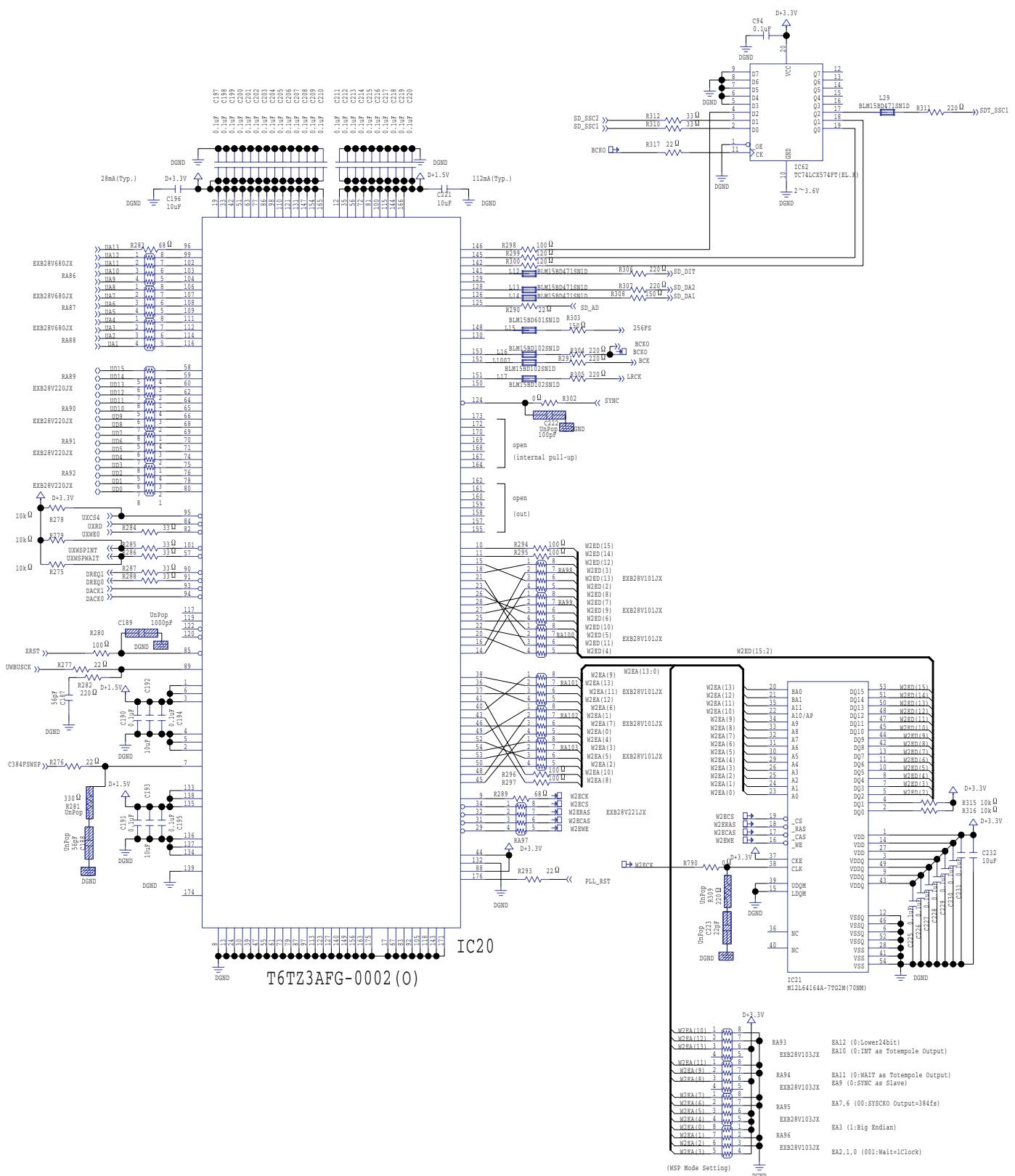


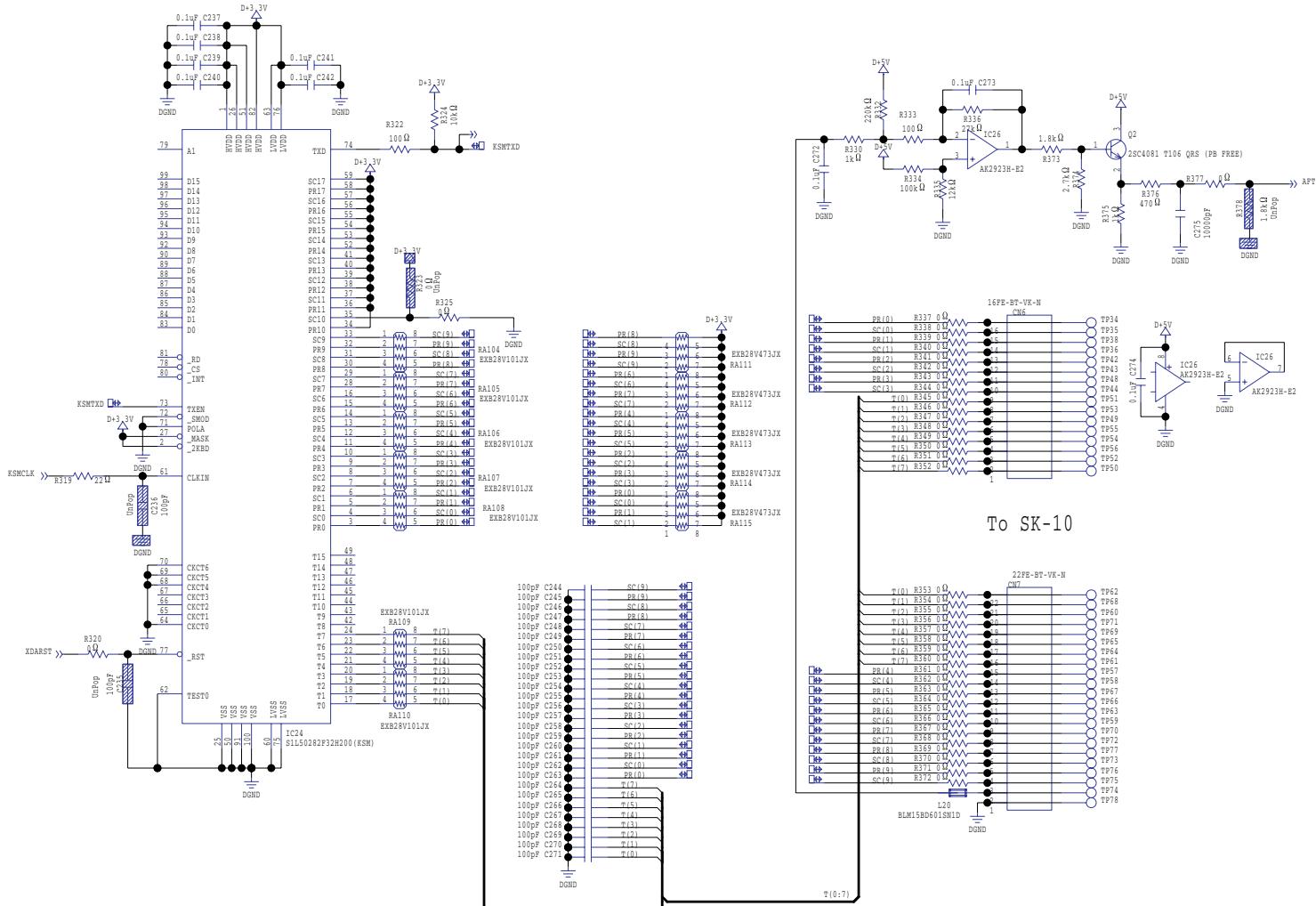
Circuit Diagram (Main Board: 2/7)



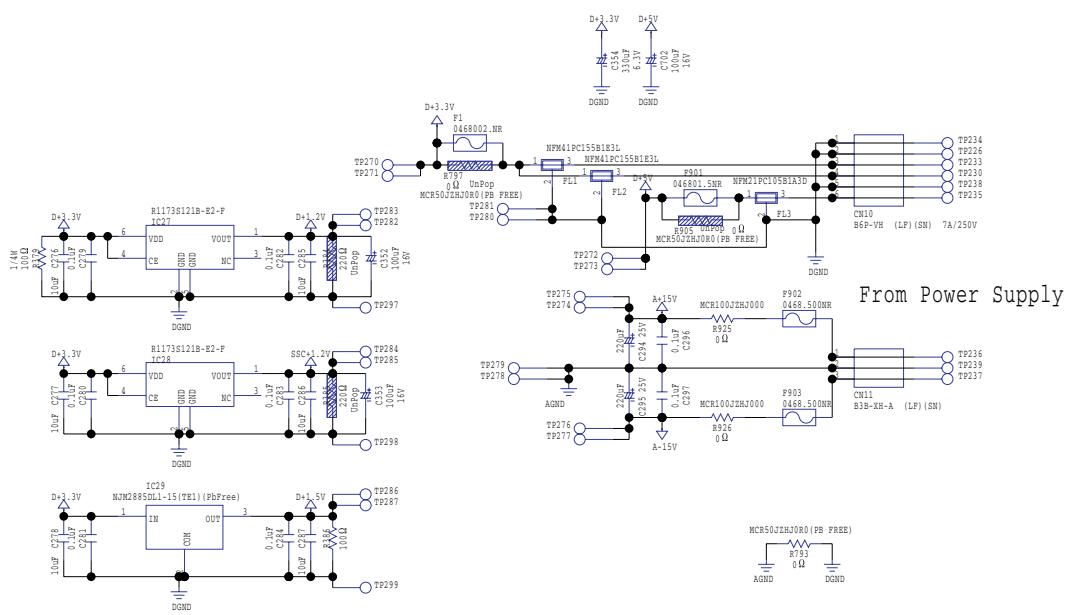
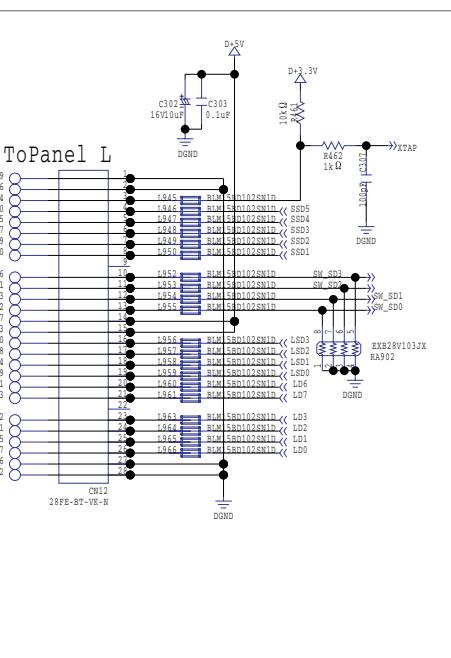
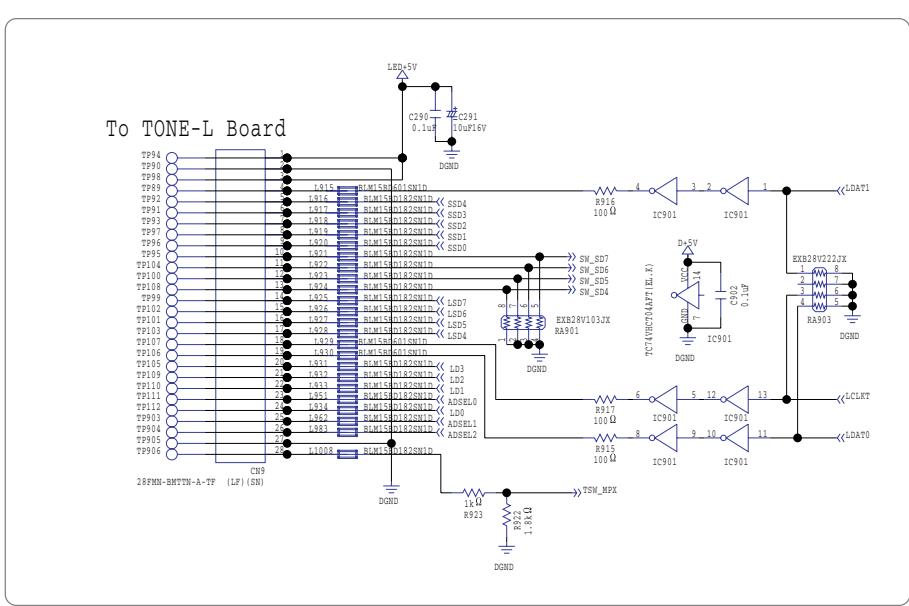
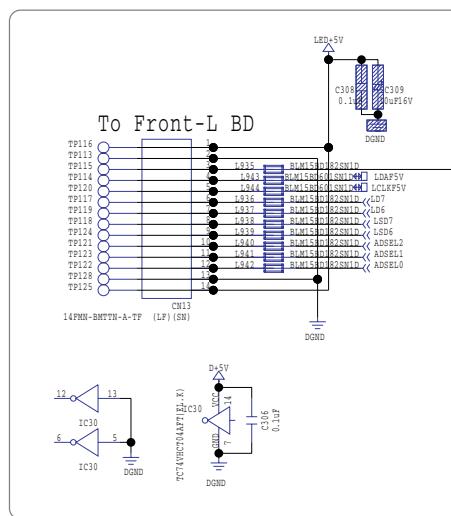
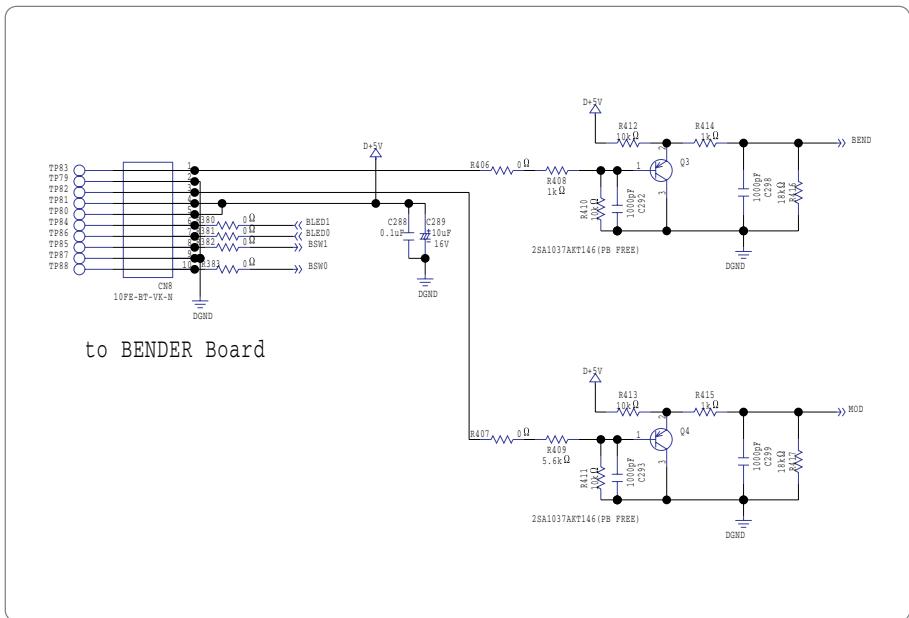


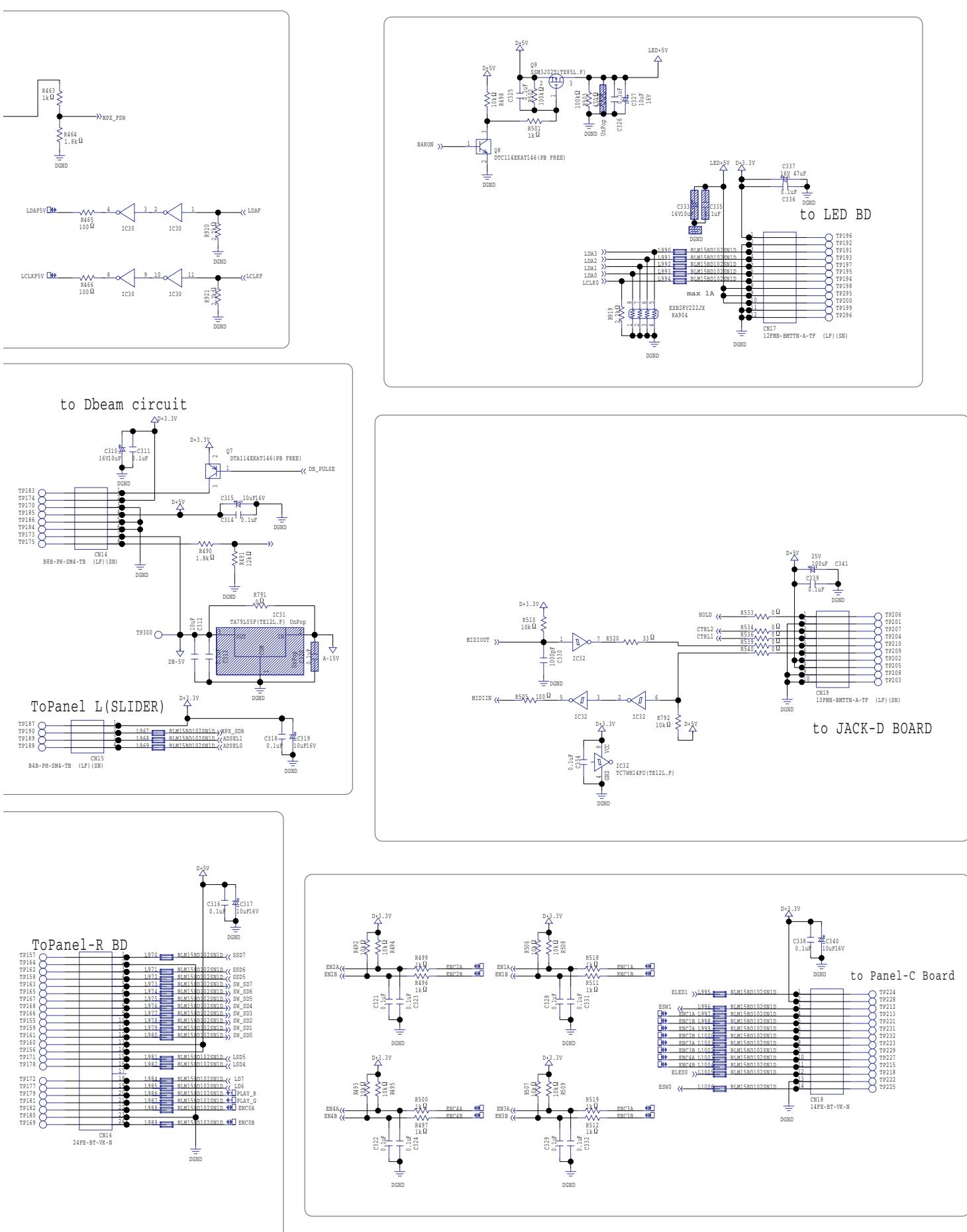
Circuit Diagram (Main Board: 3/7)



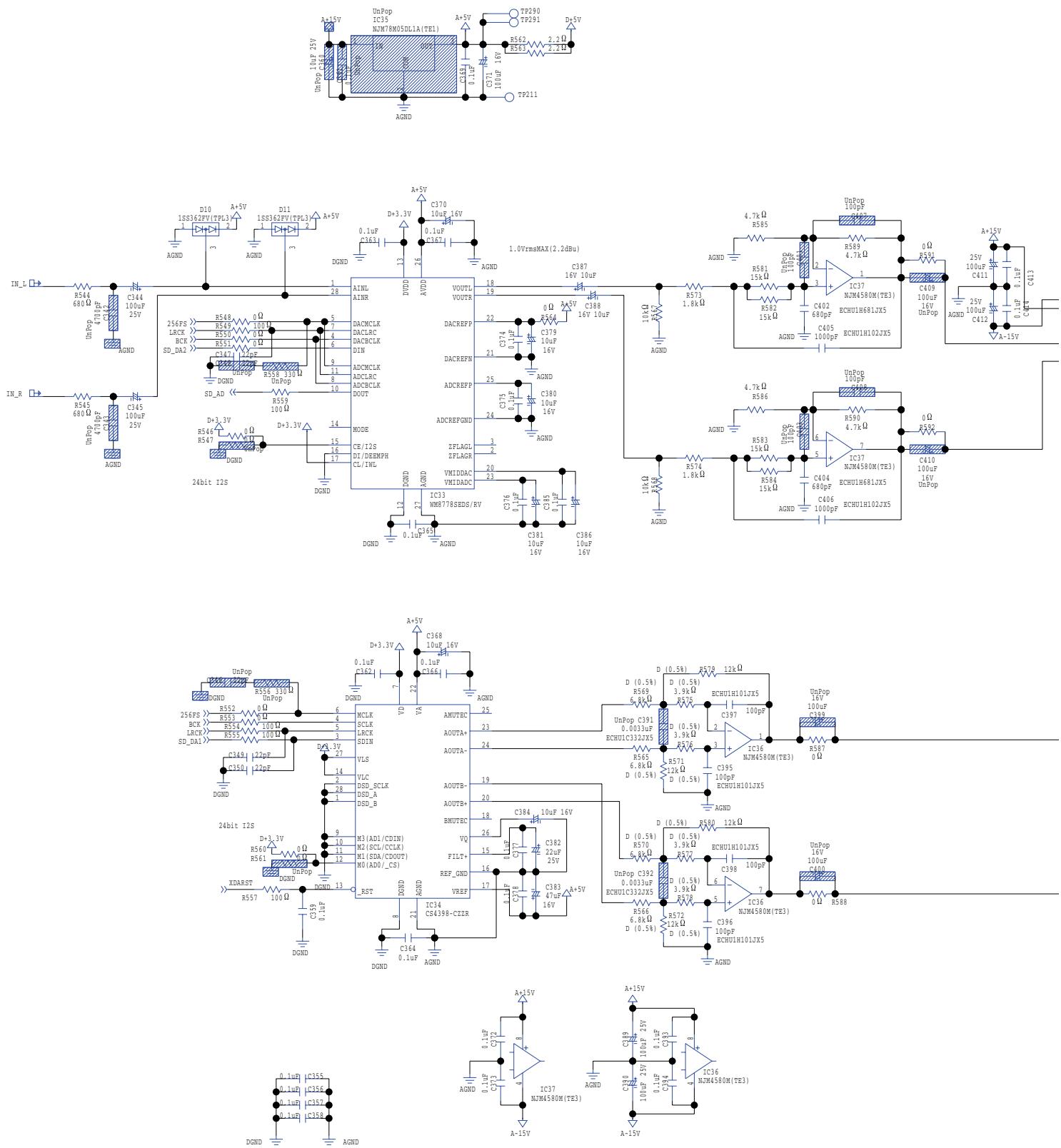


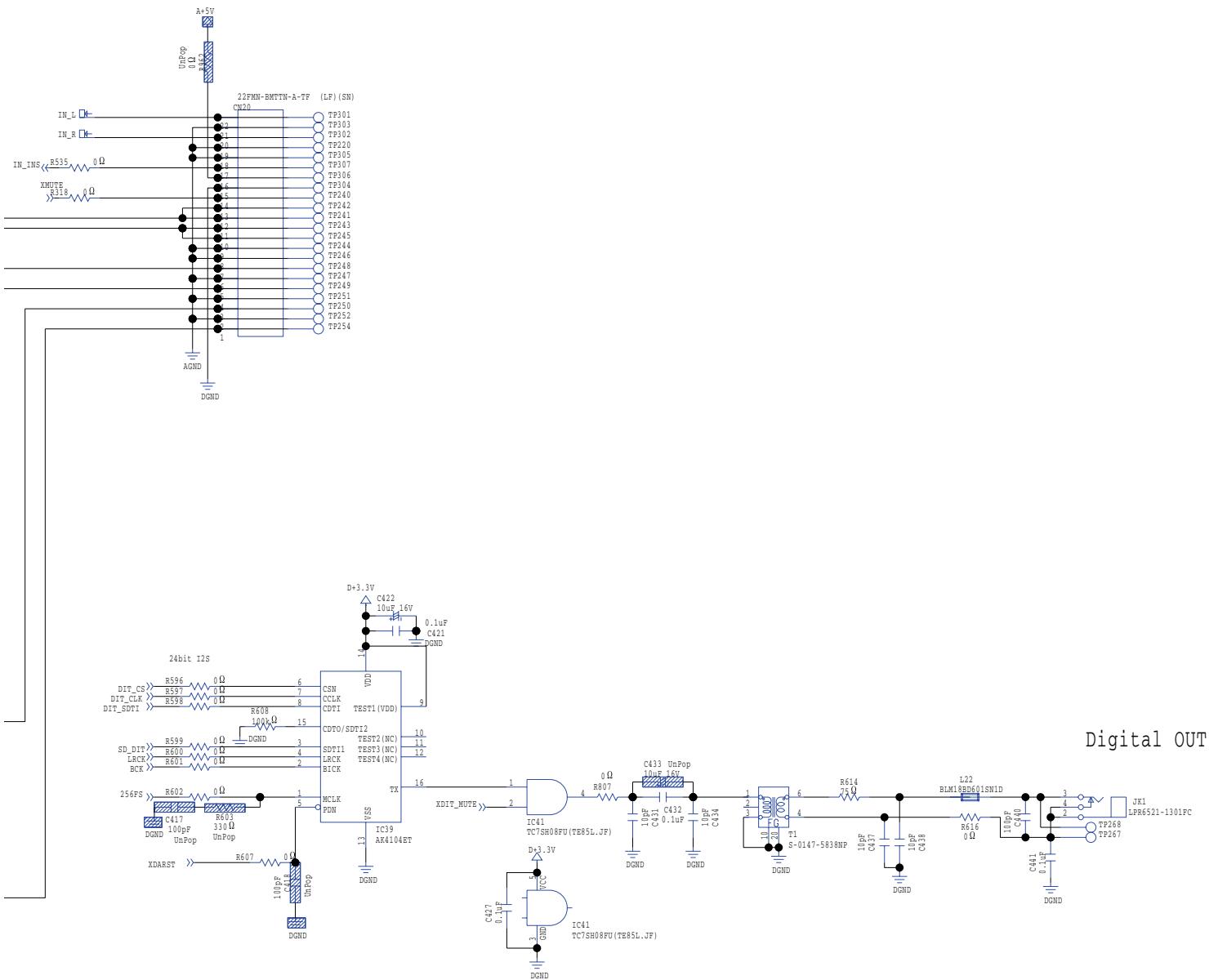
Circuit Diagram (Main Board: 4/7)



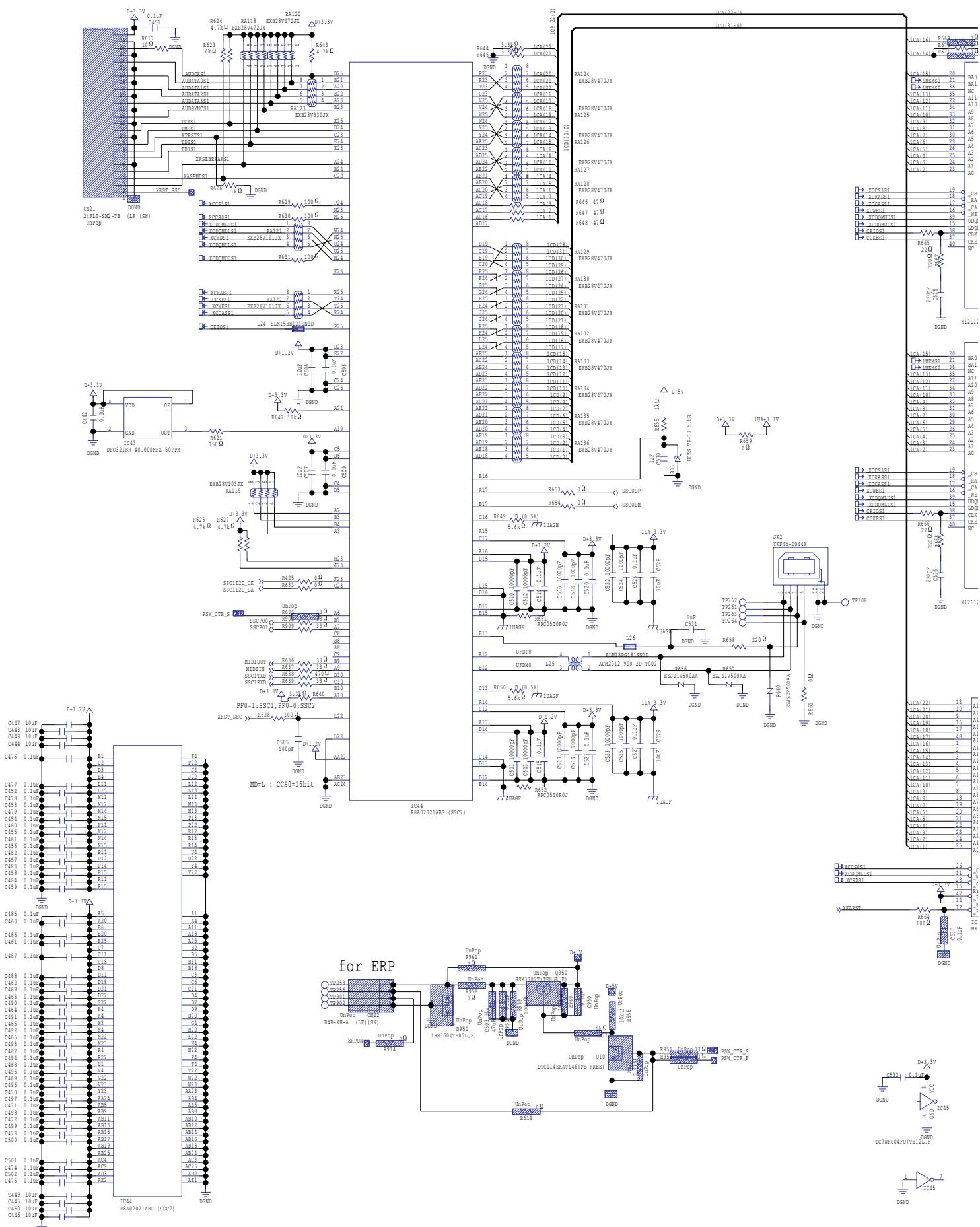


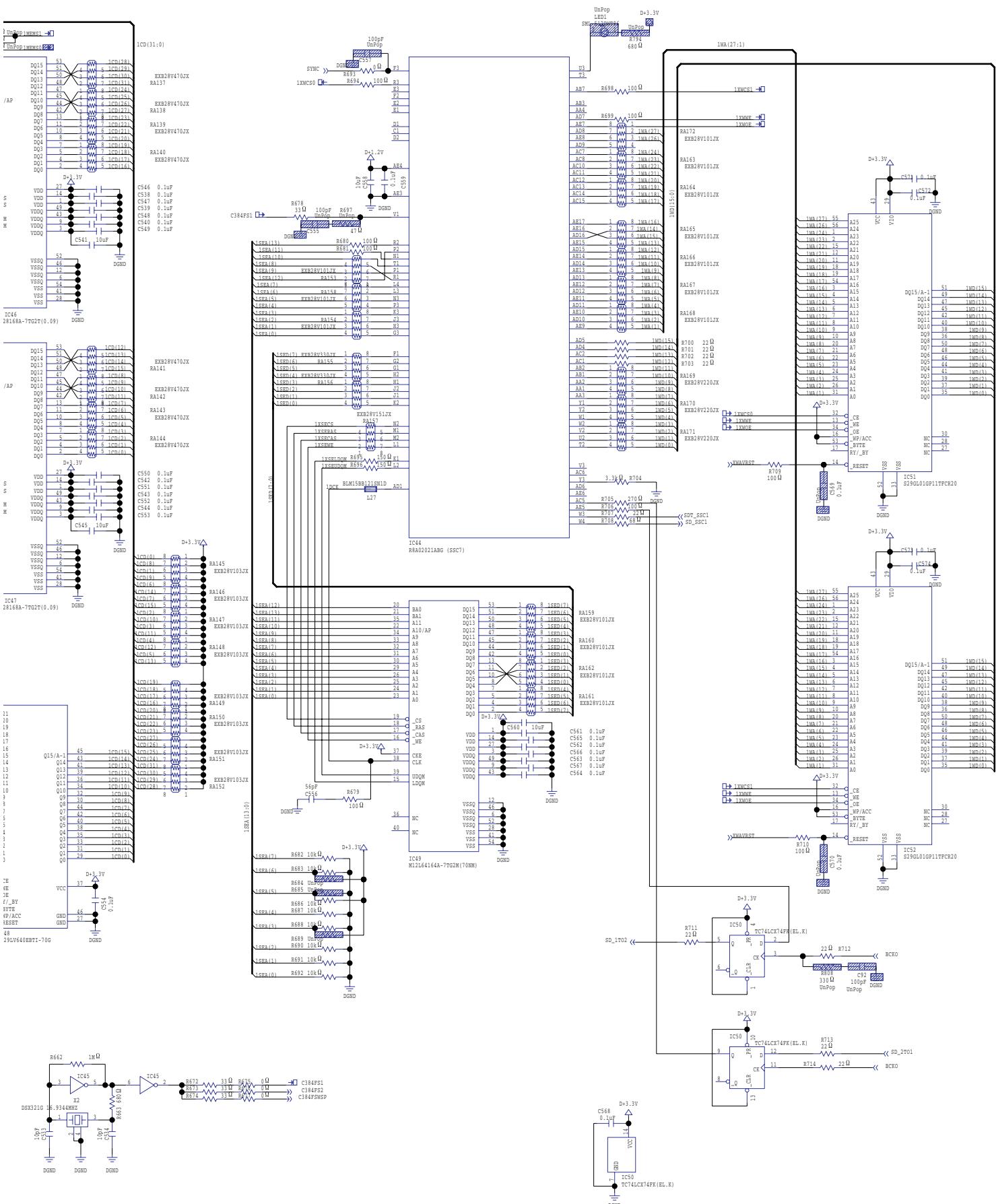
Circuit Diagram (Main Board: 5/7)



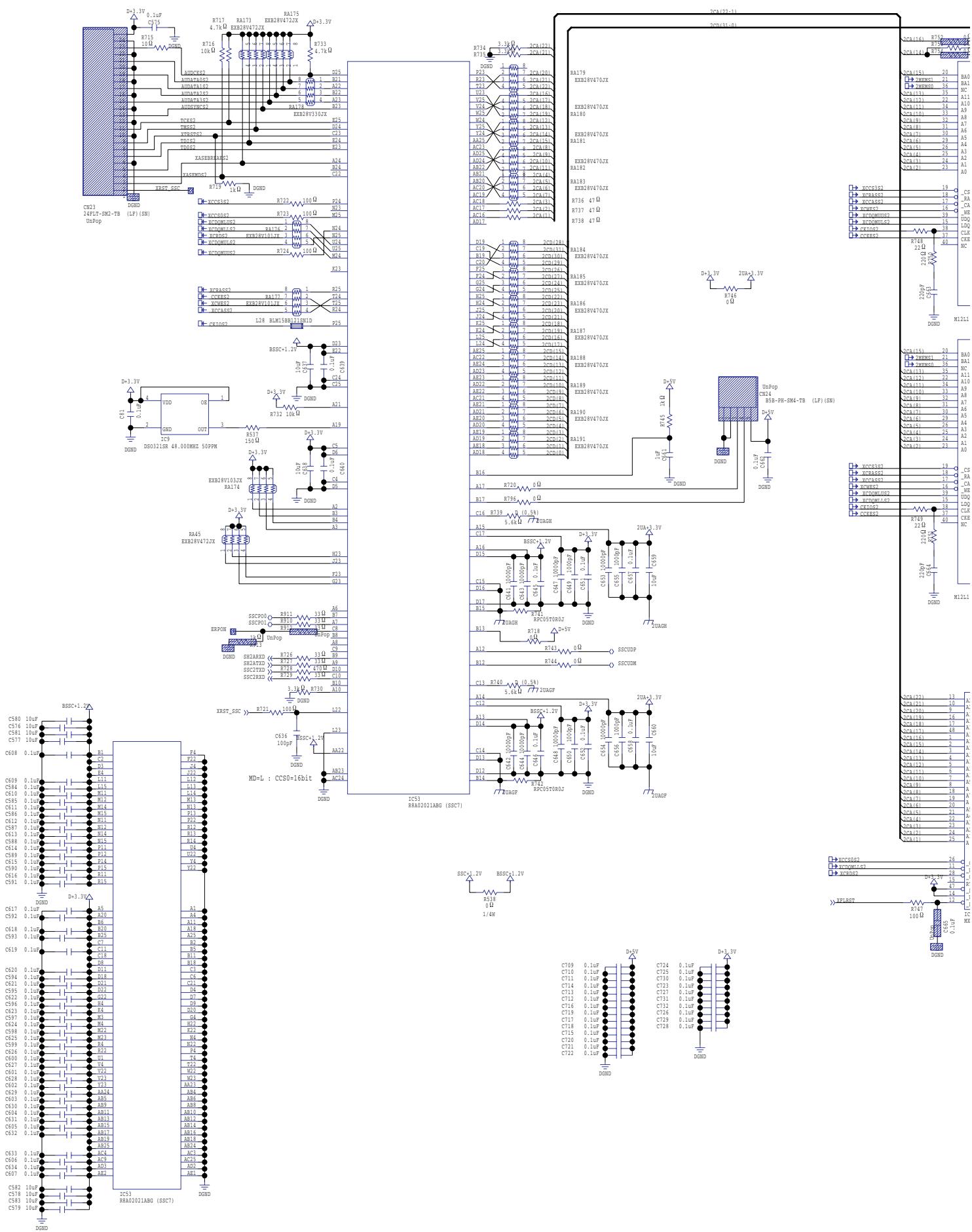


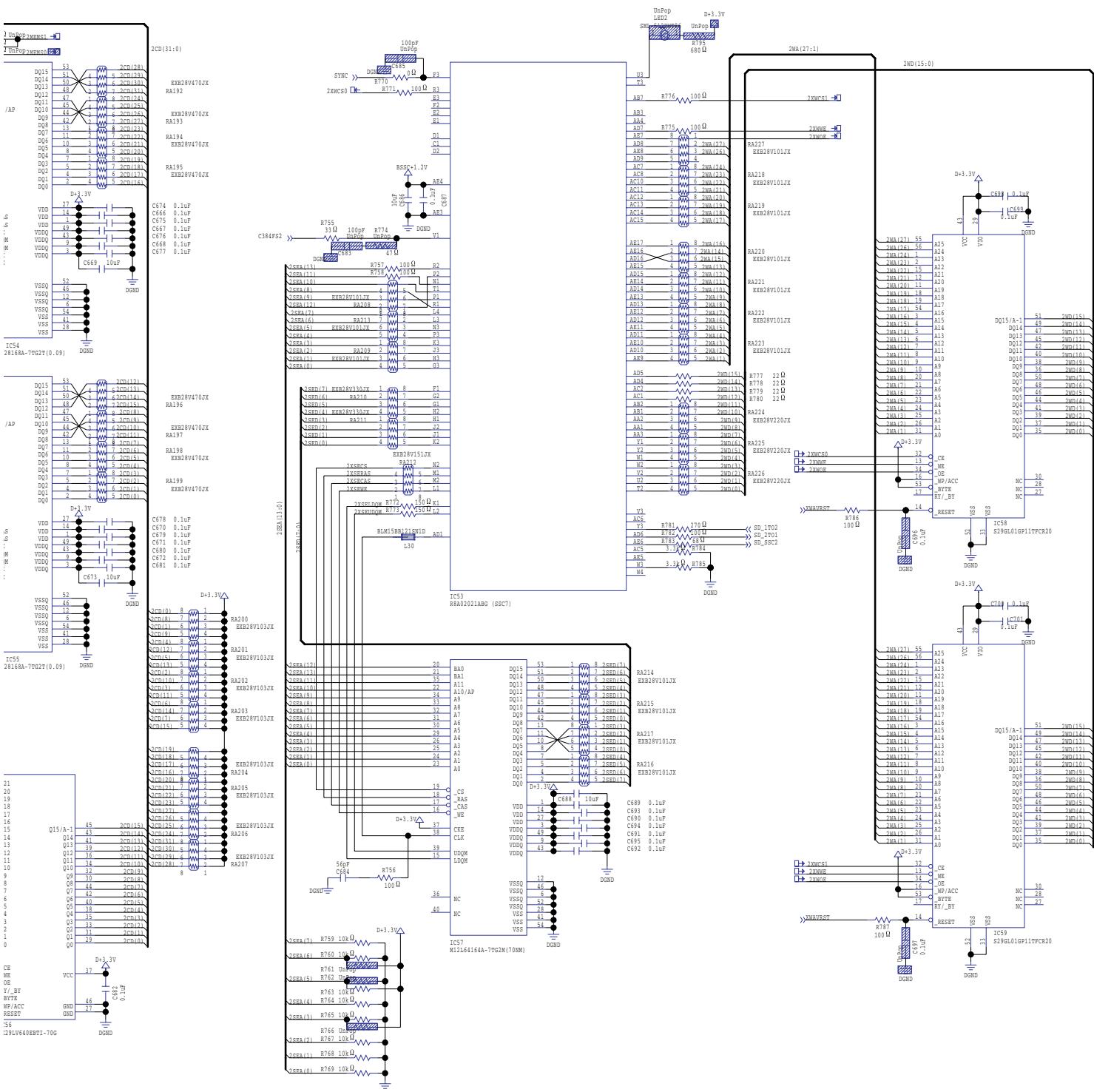
Circuit Diagram (Main Board: 6/7)



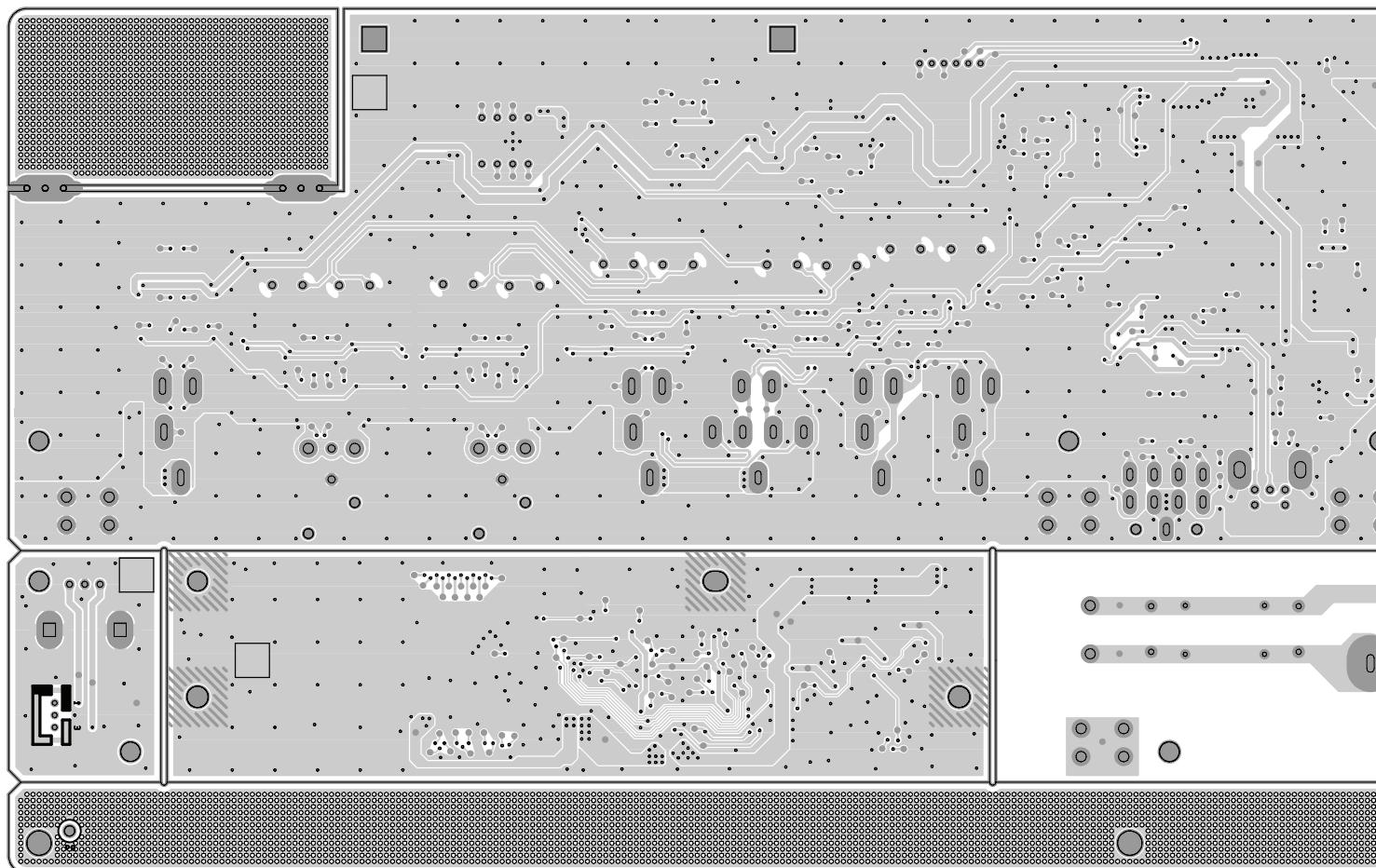
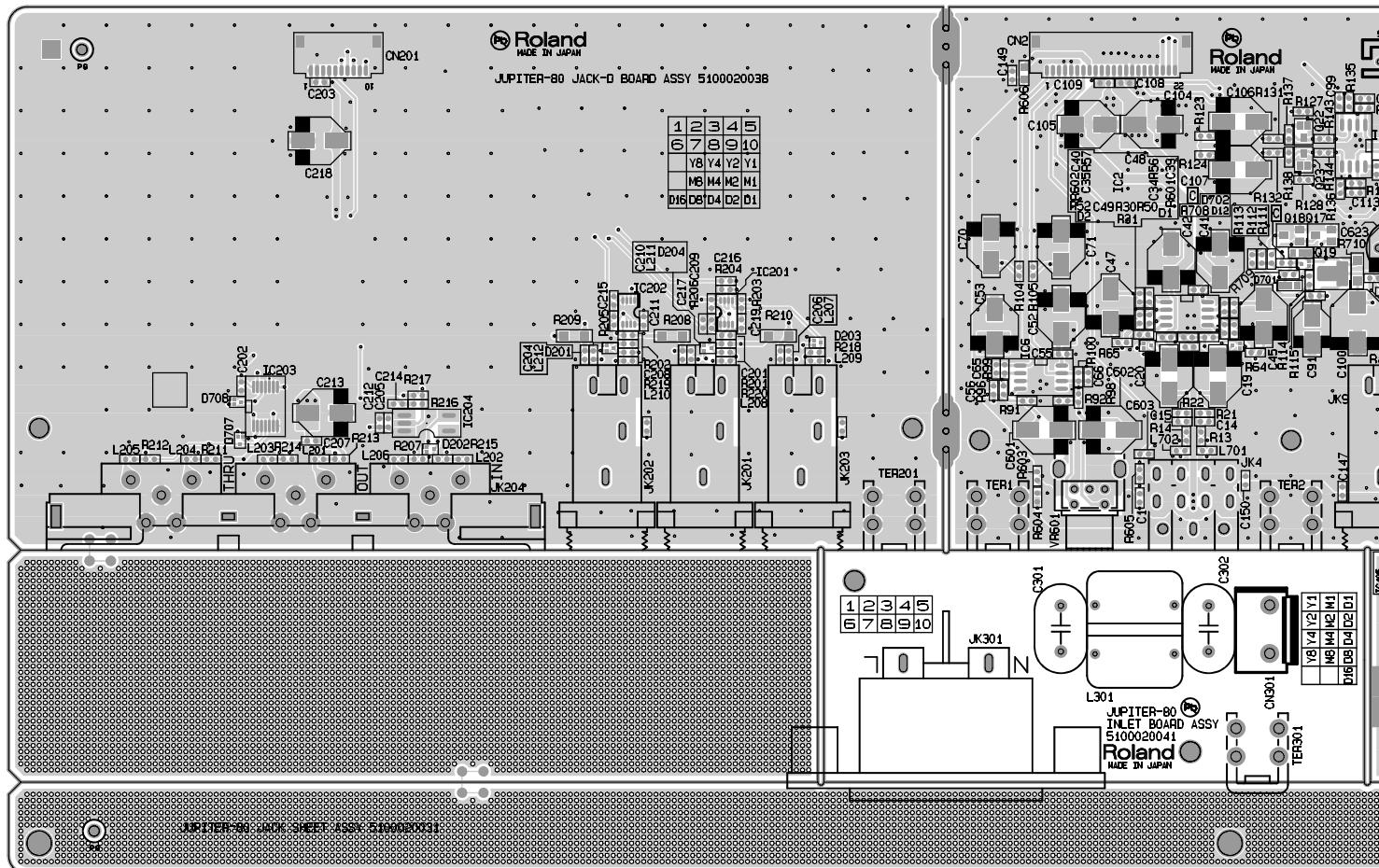


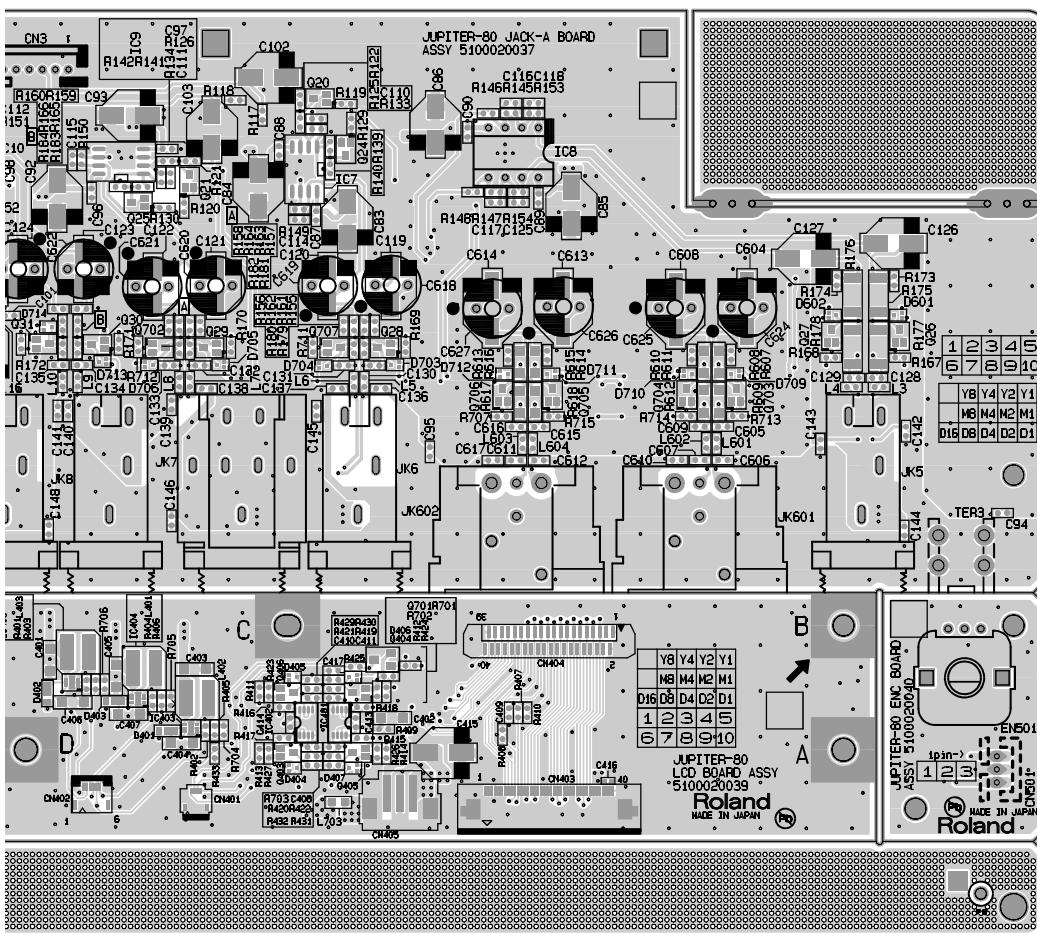
Circuit Diagram (Main Board: 7/7)



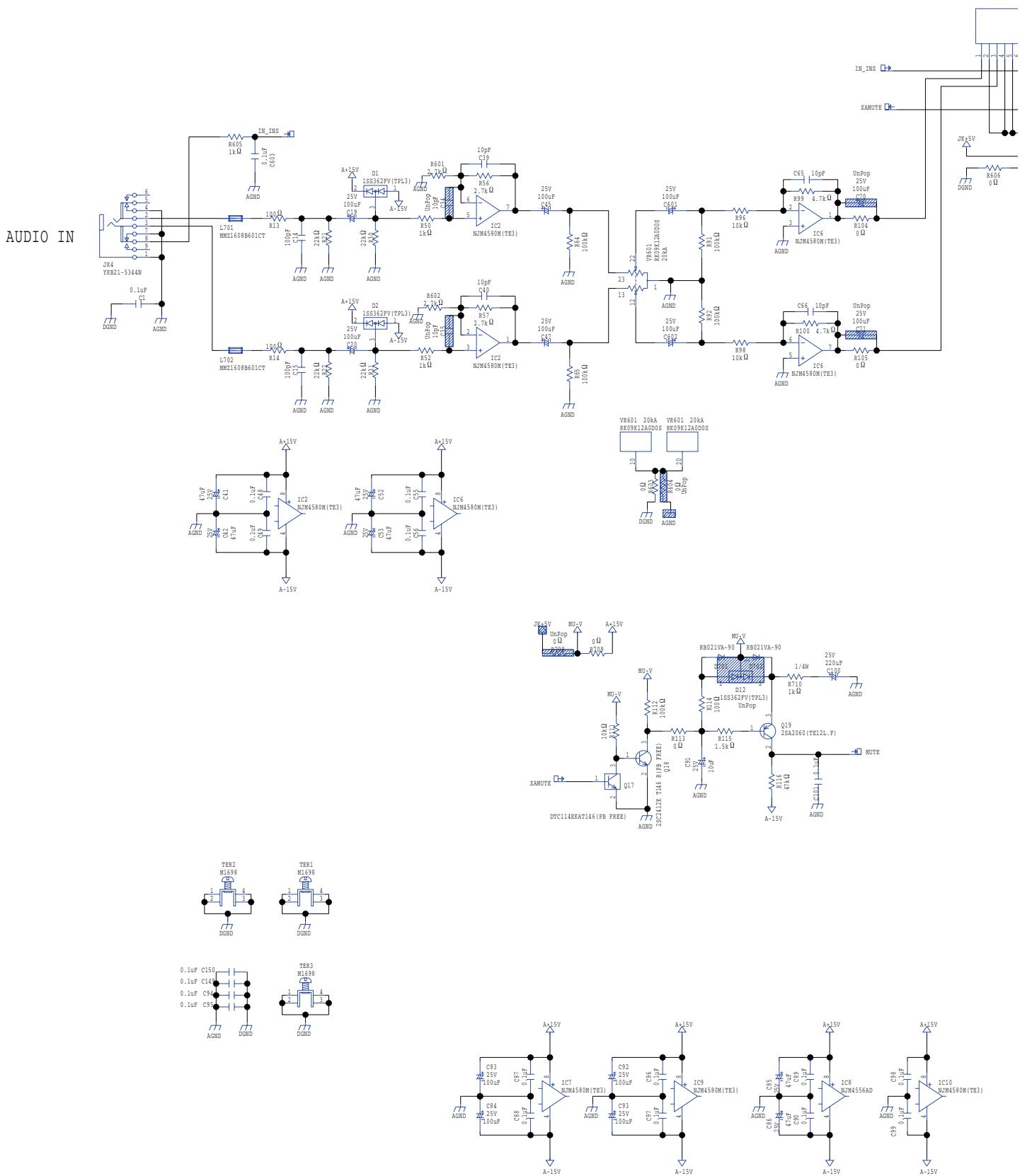


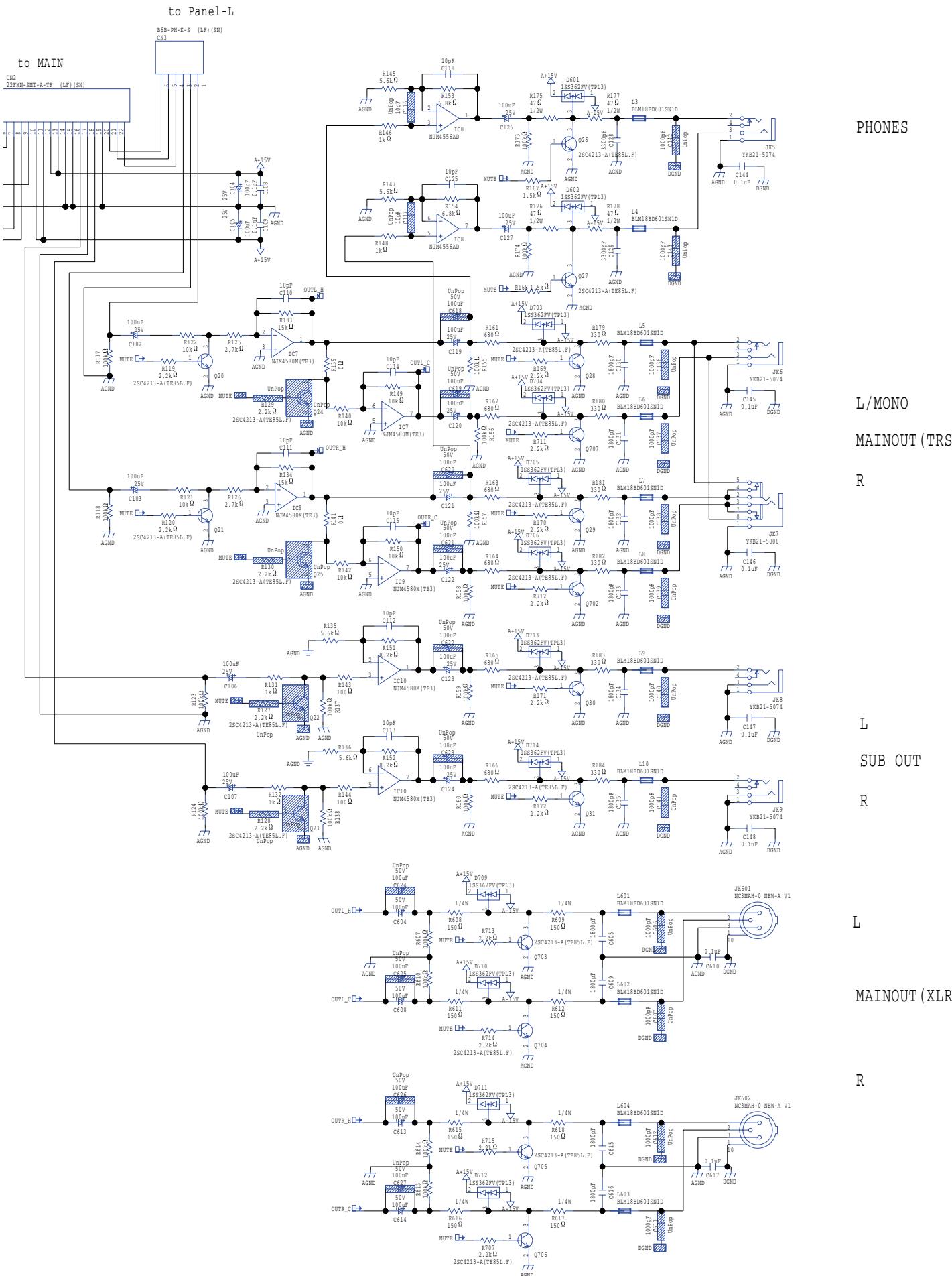
Circuit Board (Jack-A/D, LCD, ENC, INLET Board)



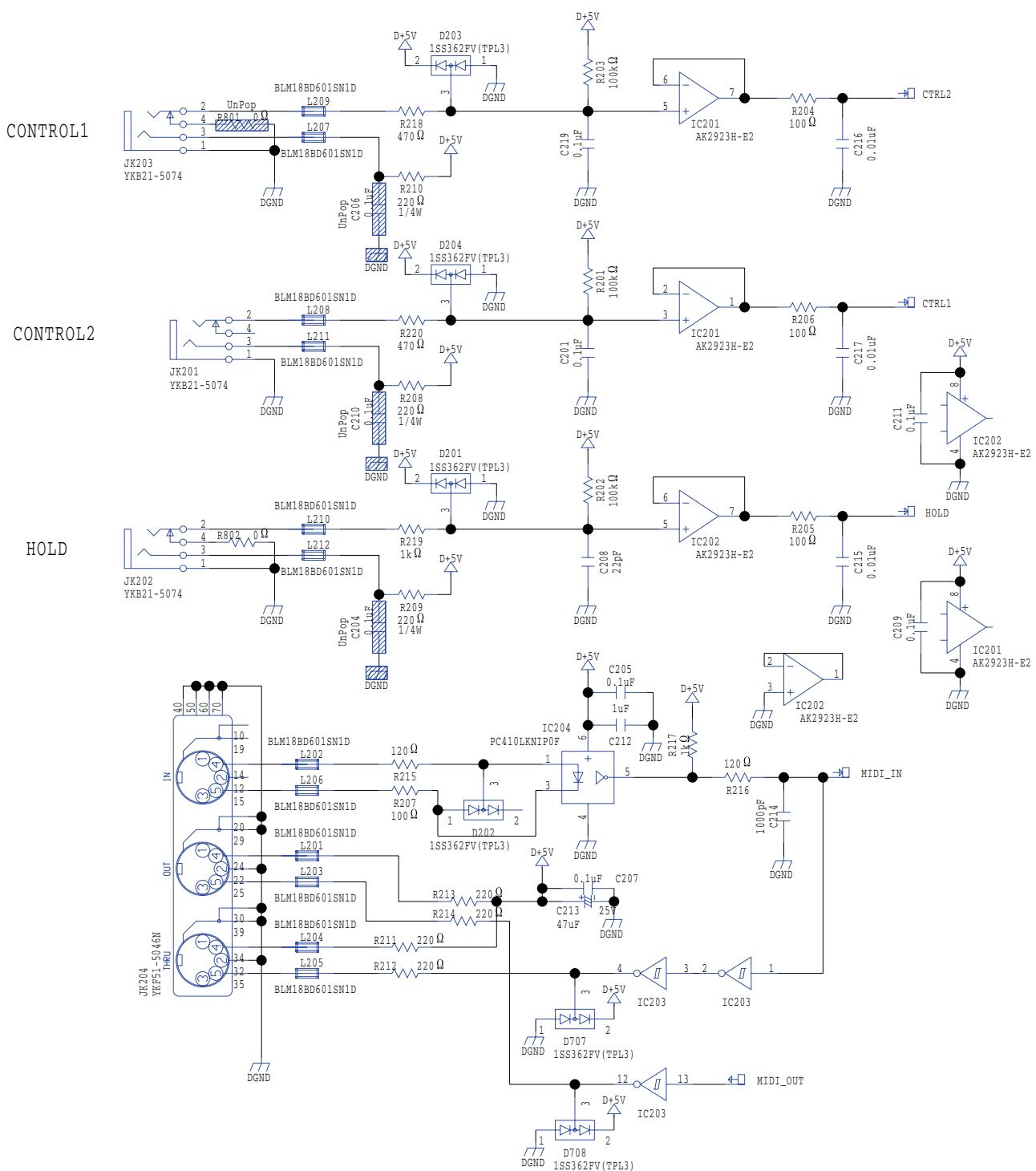


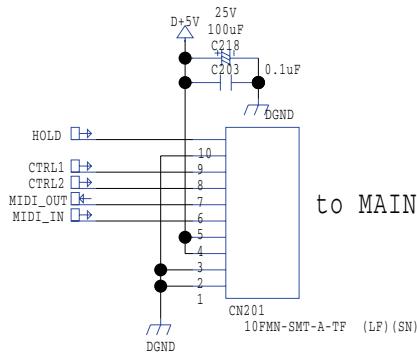
Circuit Diagram (Jack-A Board)



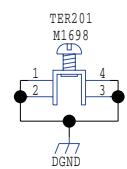


Circuit Diagram (Jack-D Board)

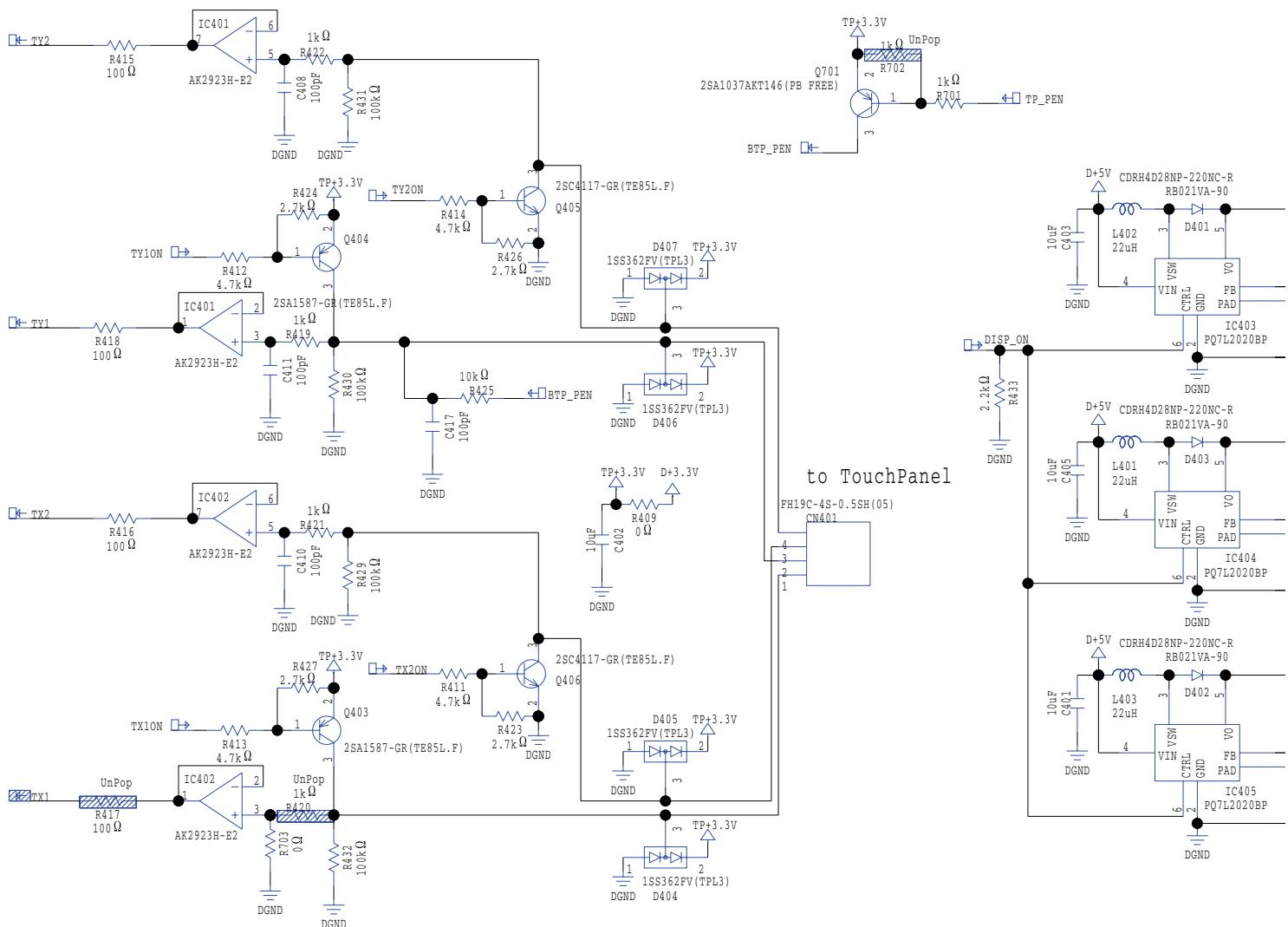




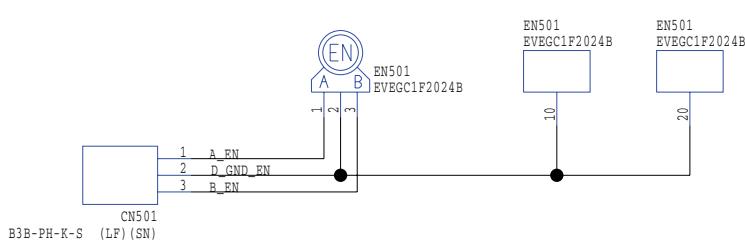
to MAIN

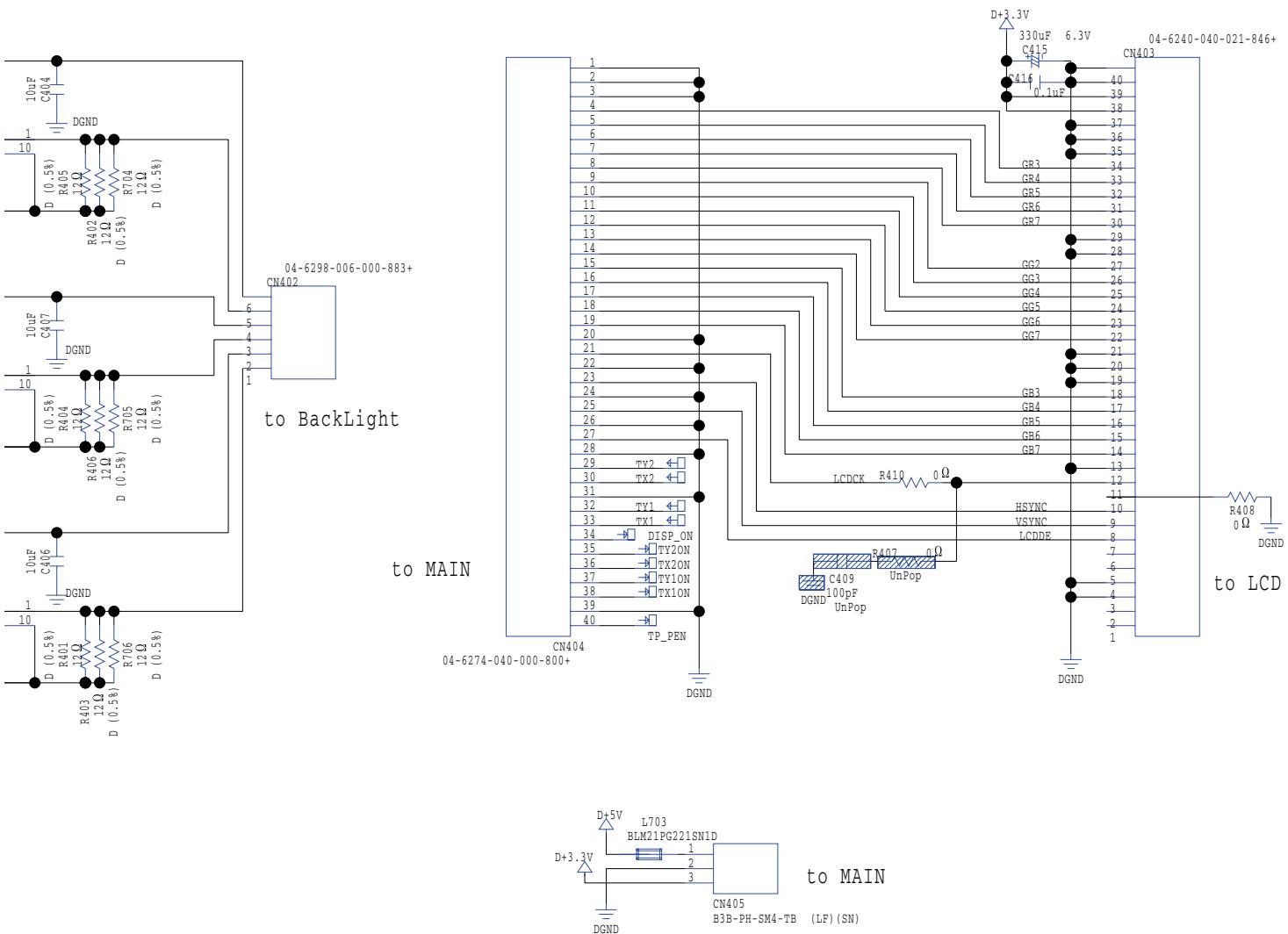


Circuit Diagram (LCD Board)

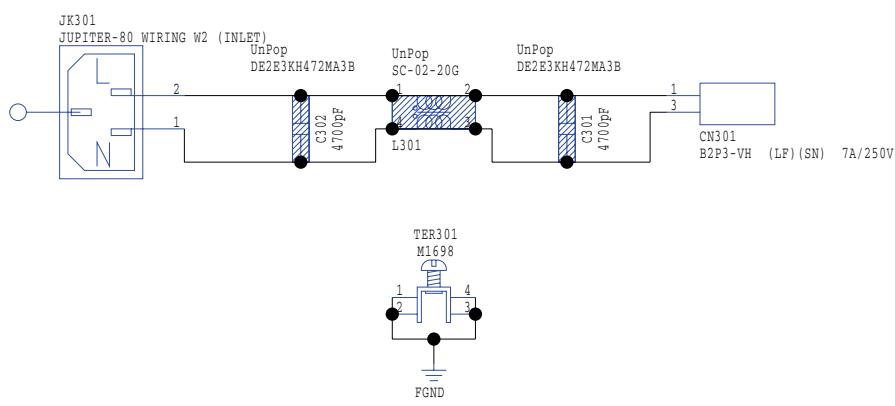


Circuit Diagram (ENC Board)

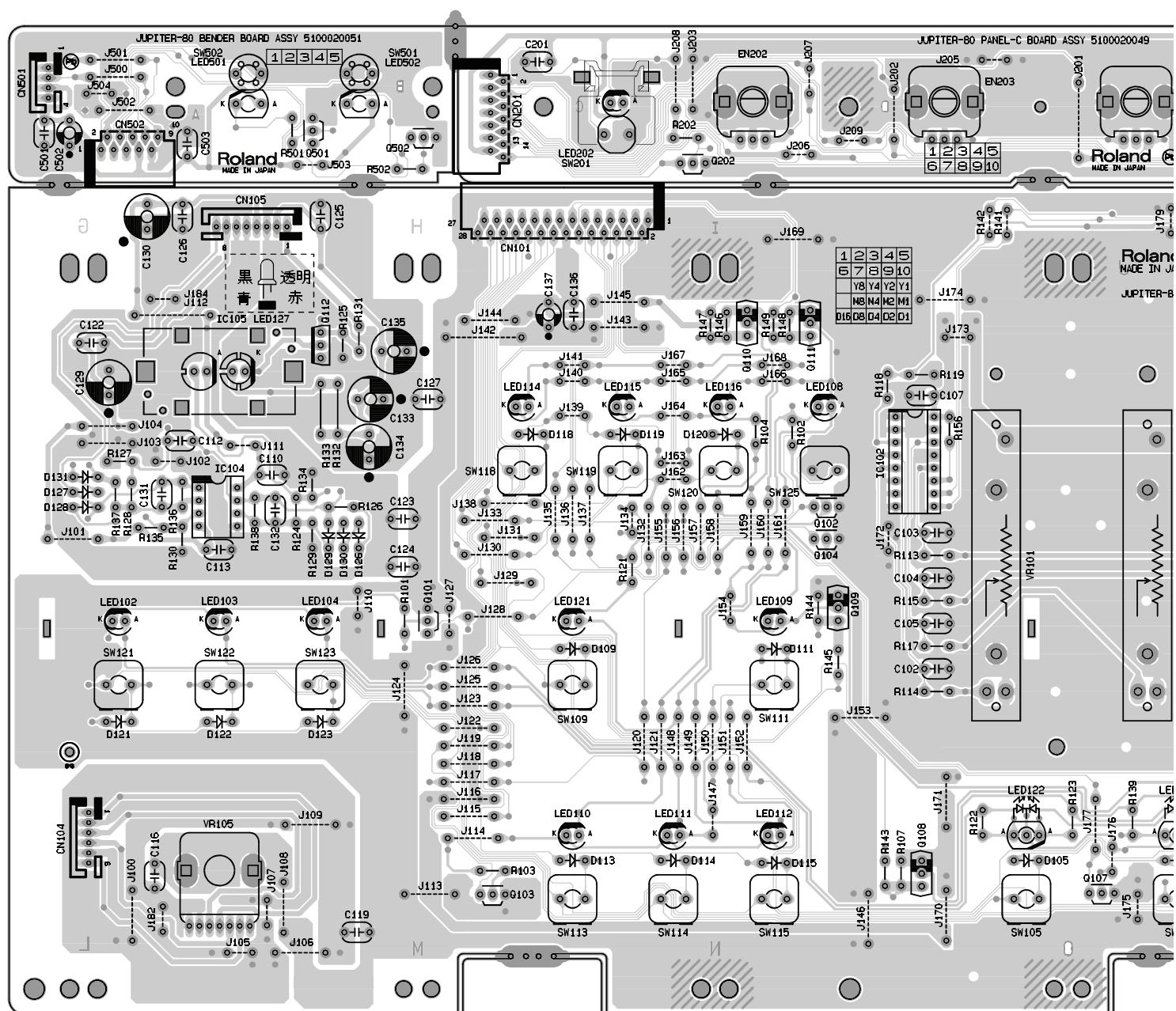


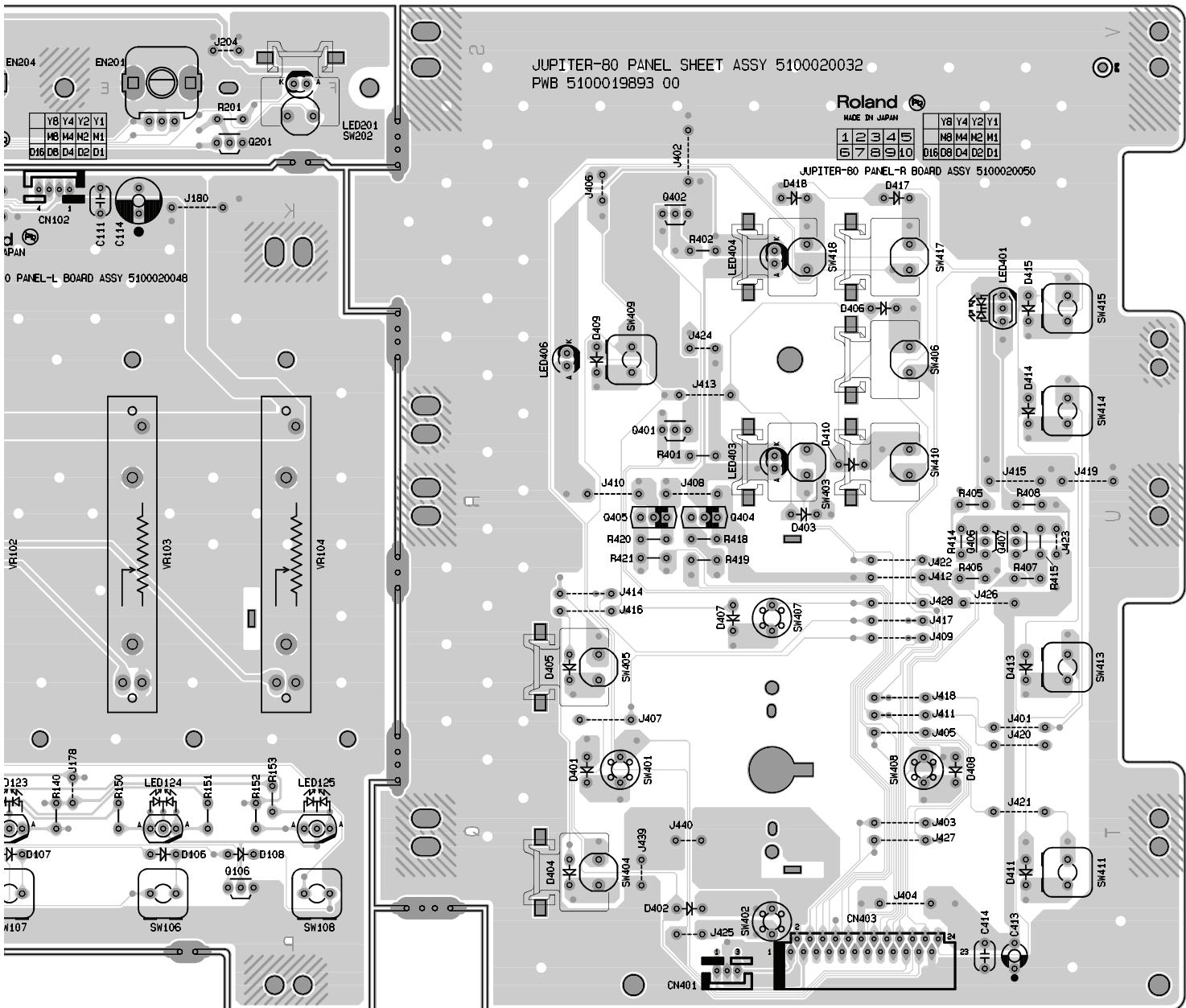


Circuit Diagram (INLET Board)

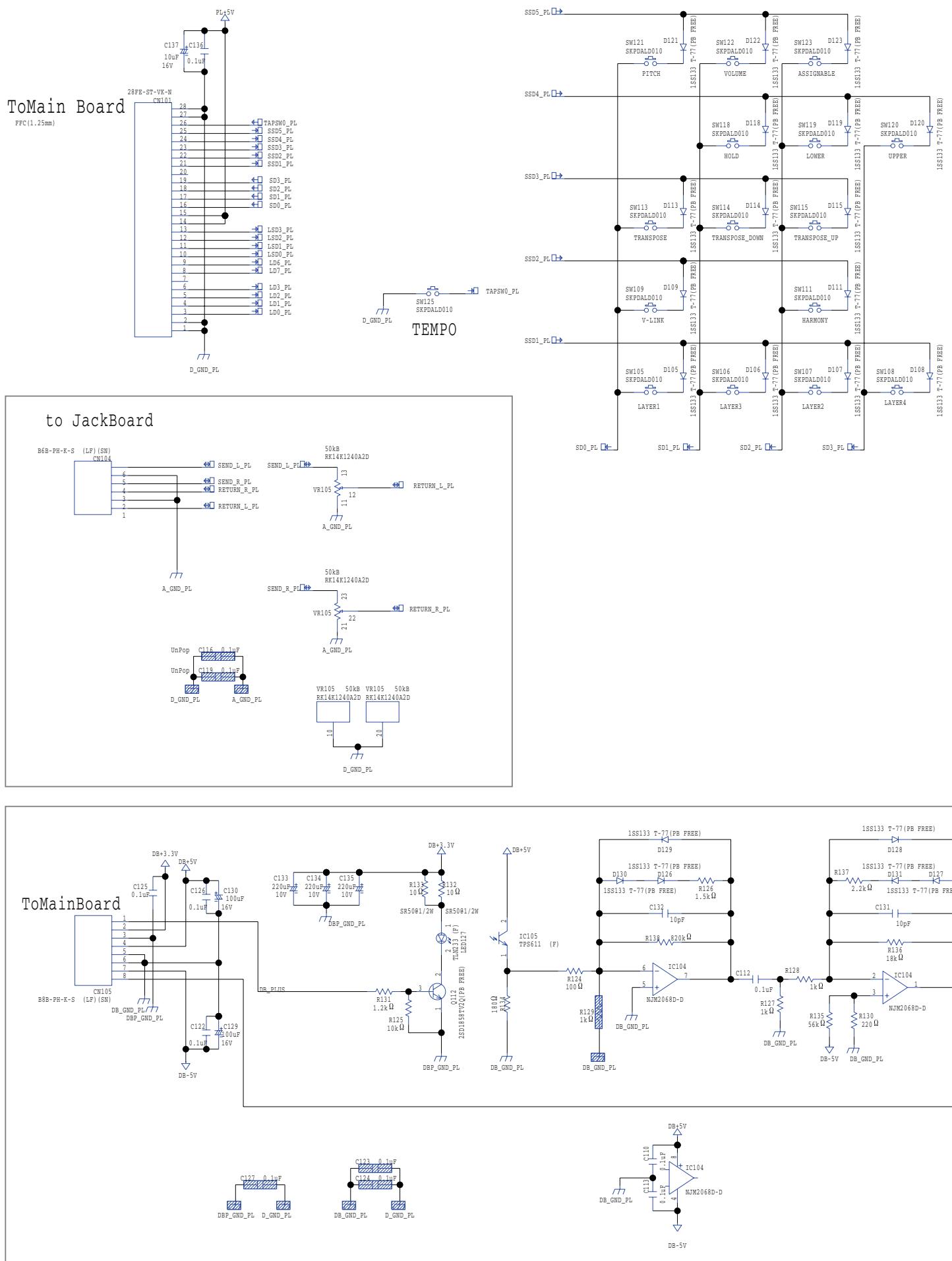


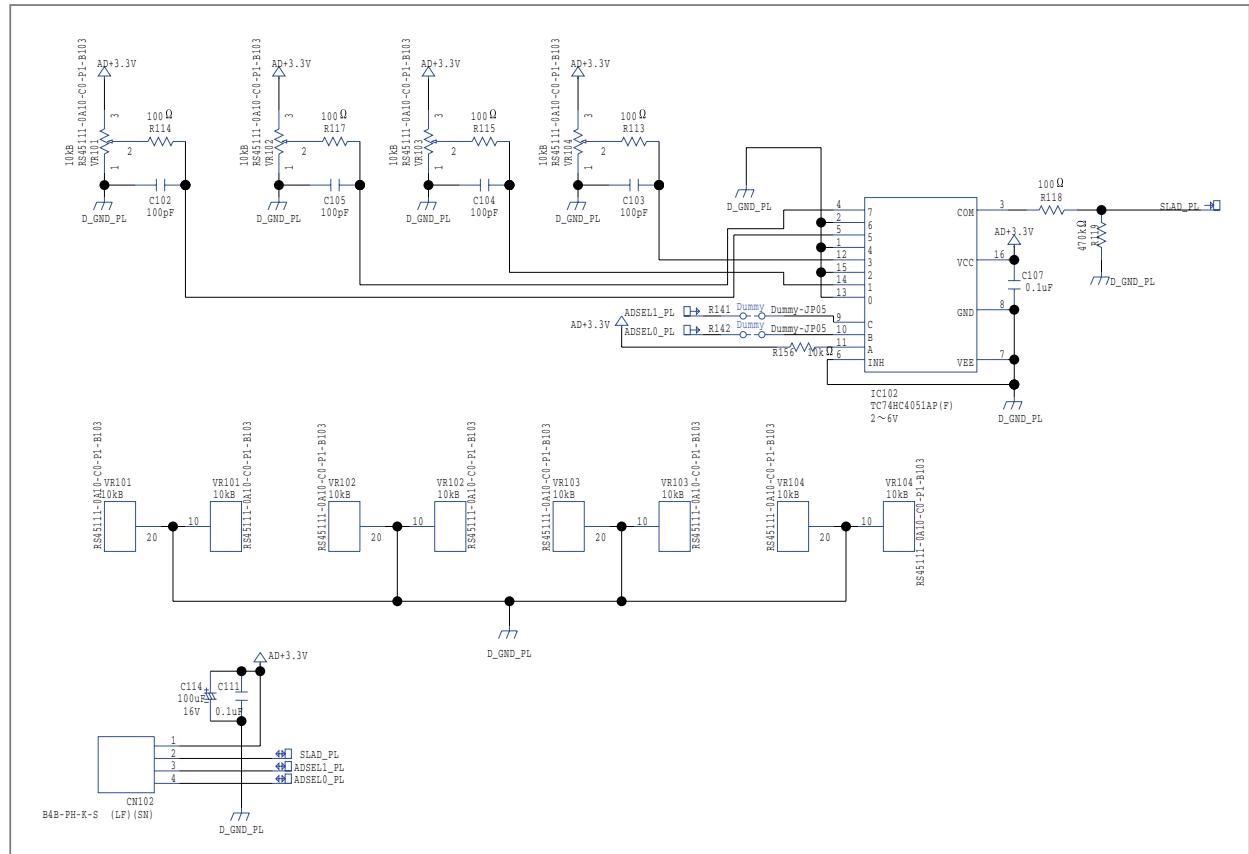
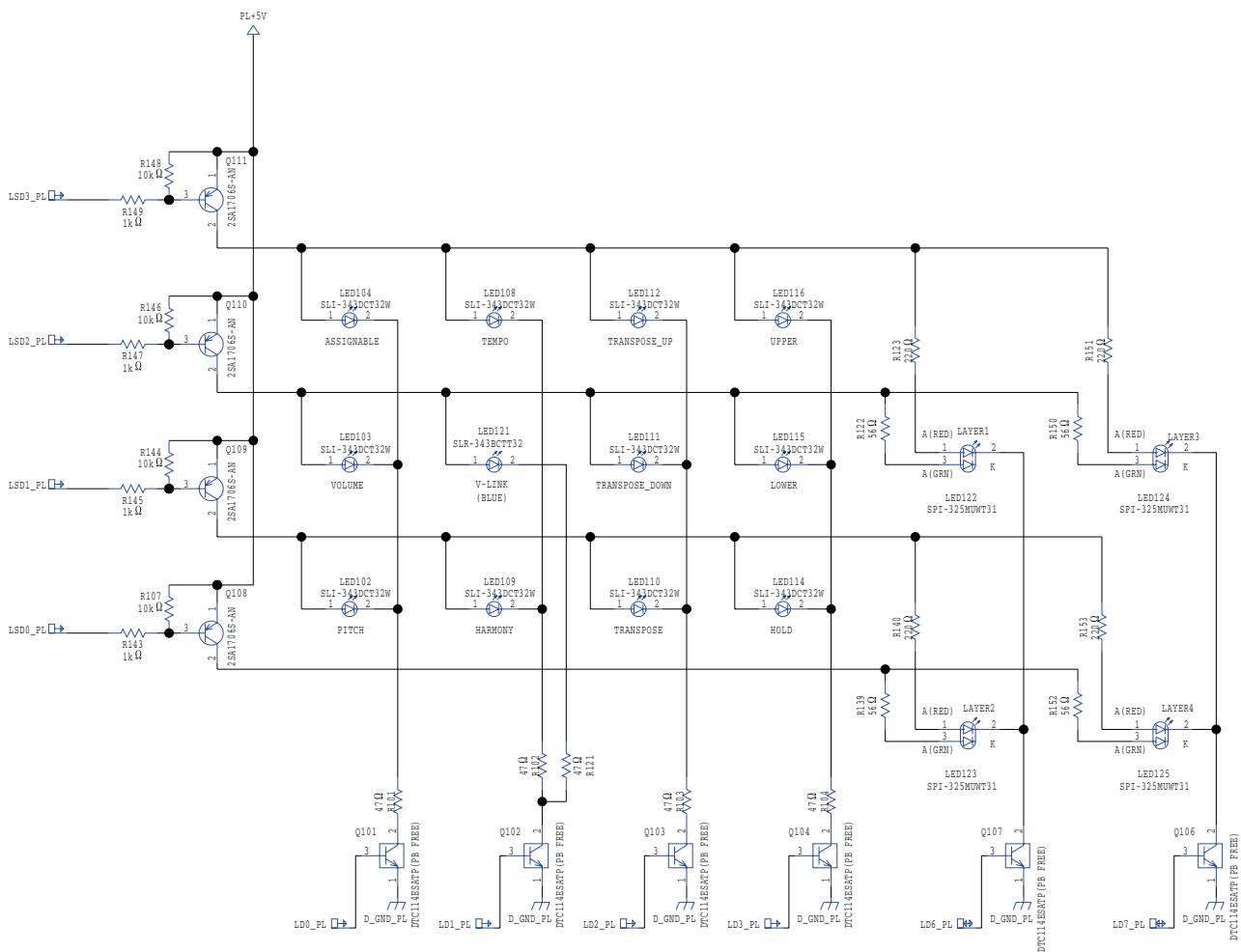
Circuit Board (Panel-L/C/R, Bender Board)





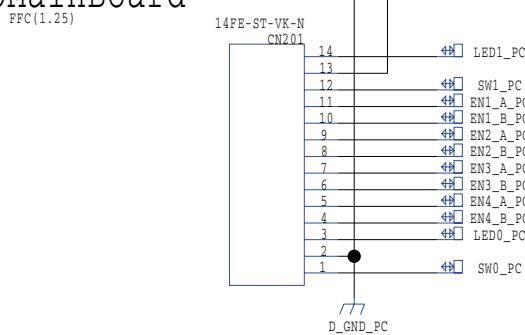
Circuit Diagram (Panel-L Board)



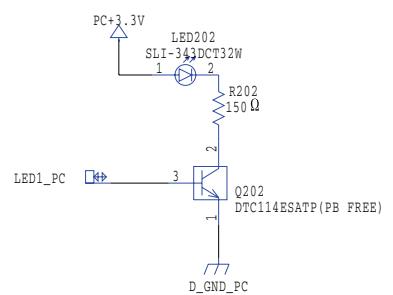


Circuit Diagram (Panel-C Board)

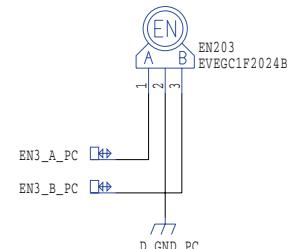
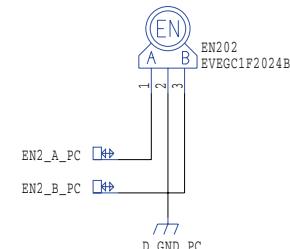
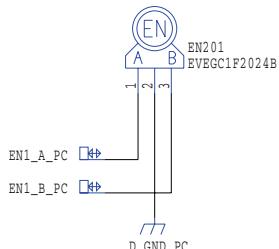
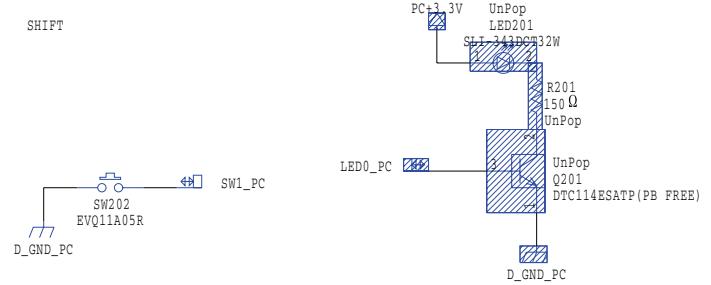
ToMainBoard

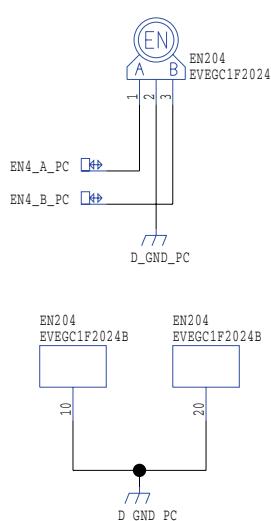


MEN



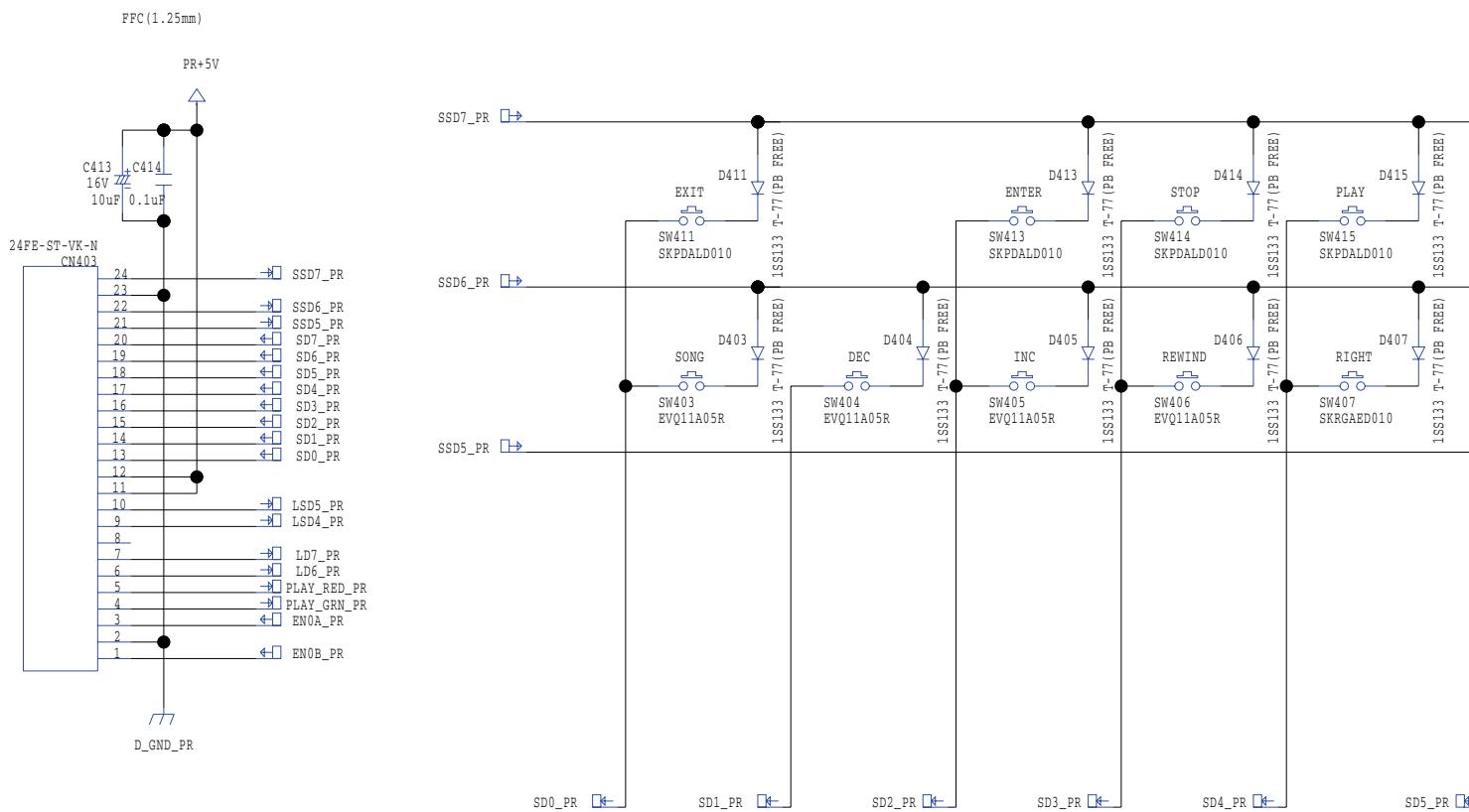
SHIFT



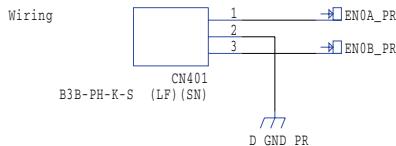


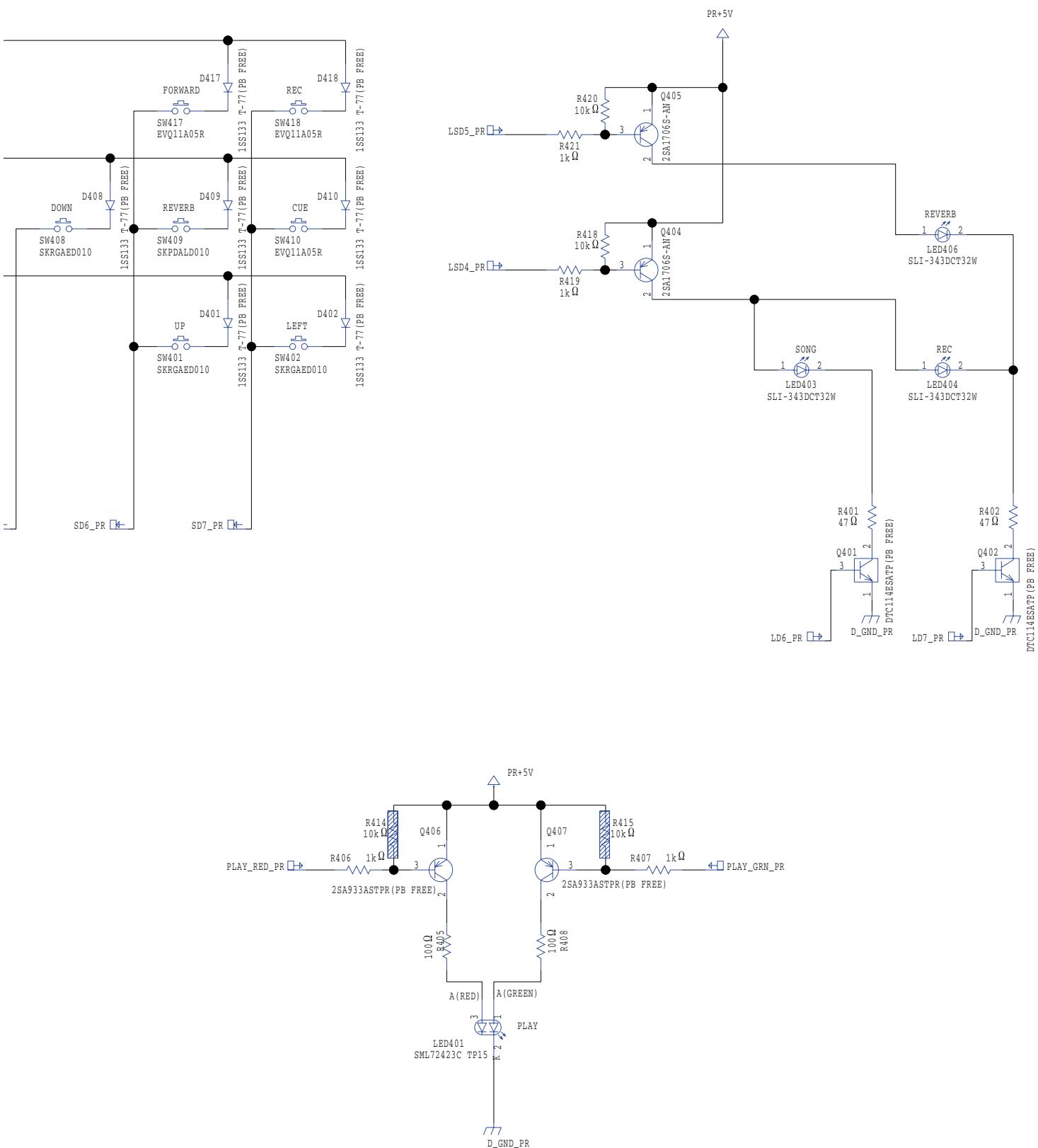
Circuit Diagram (Panel-R Board)

ToMainBoard

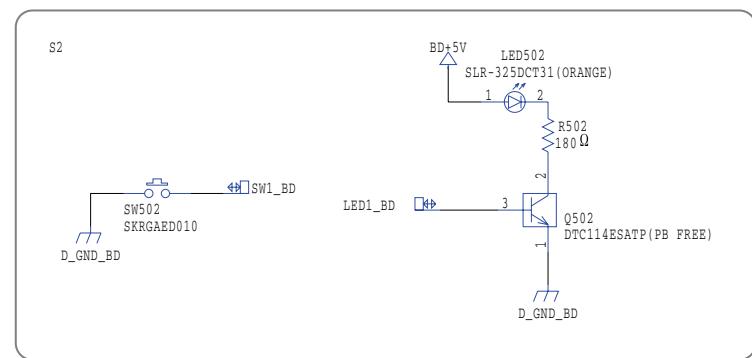
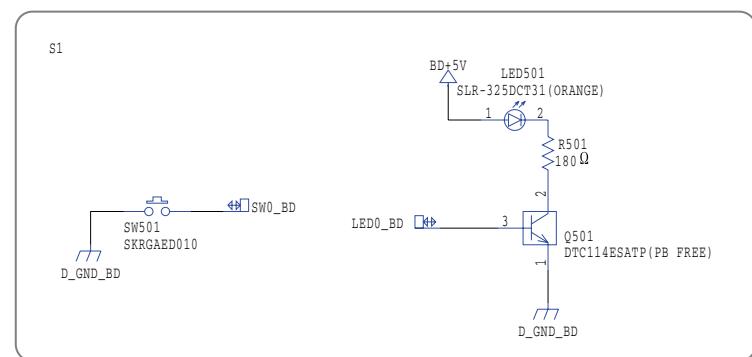
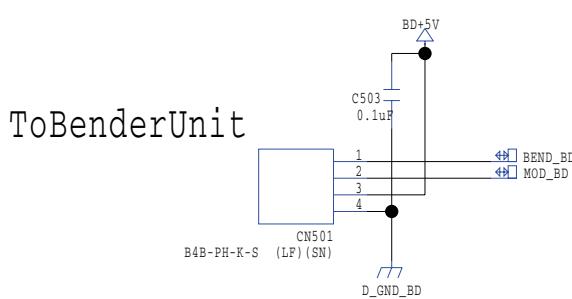
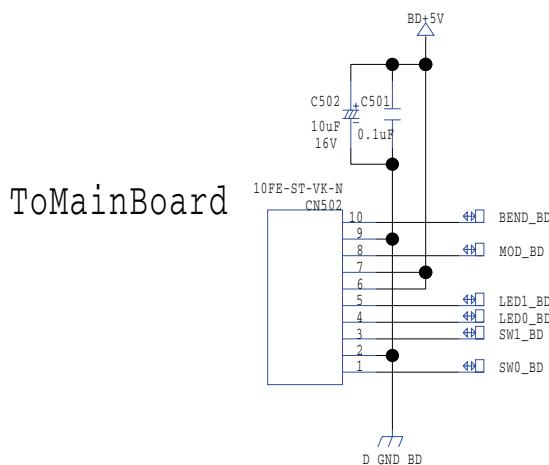


ToEncoderBoard

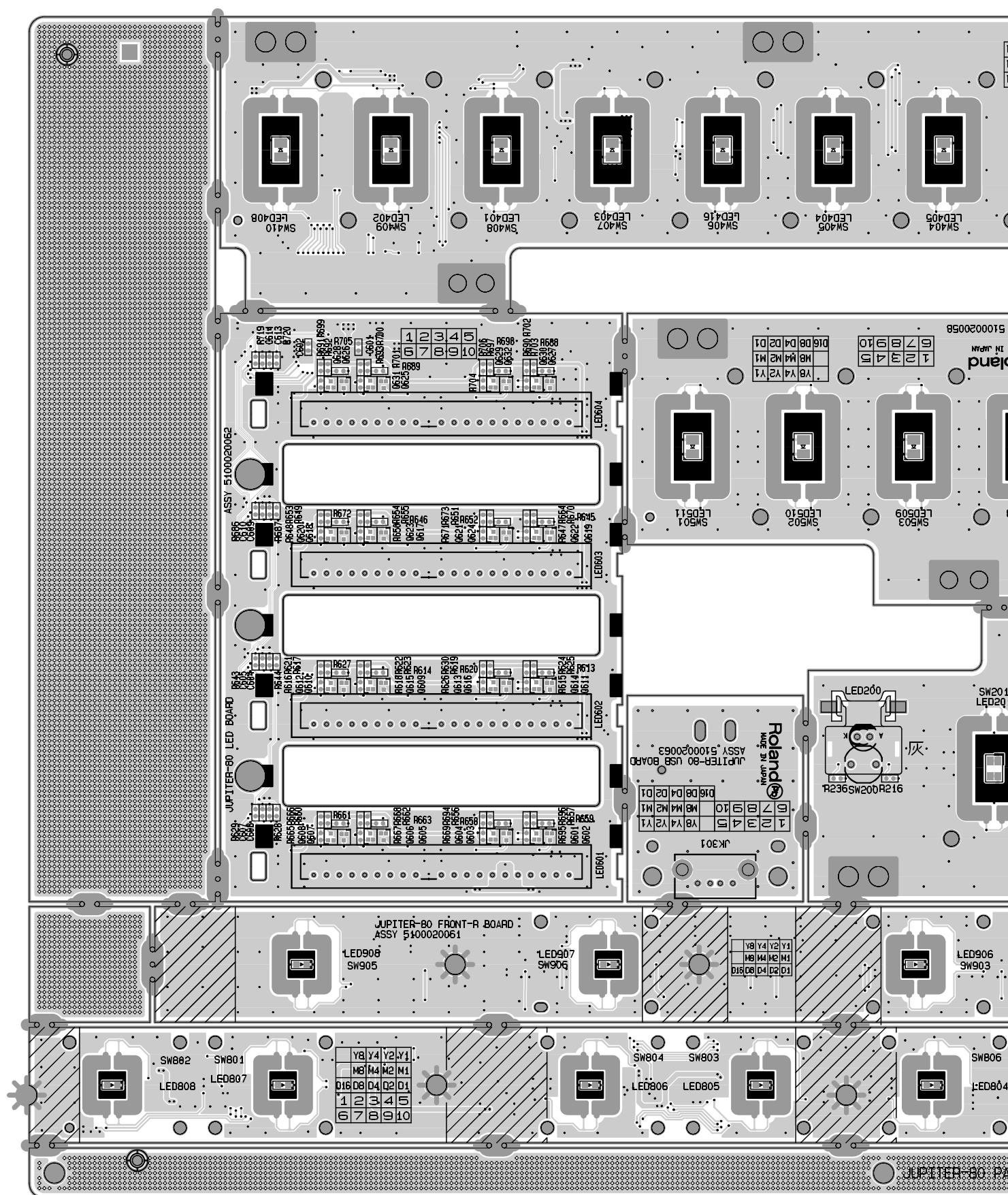


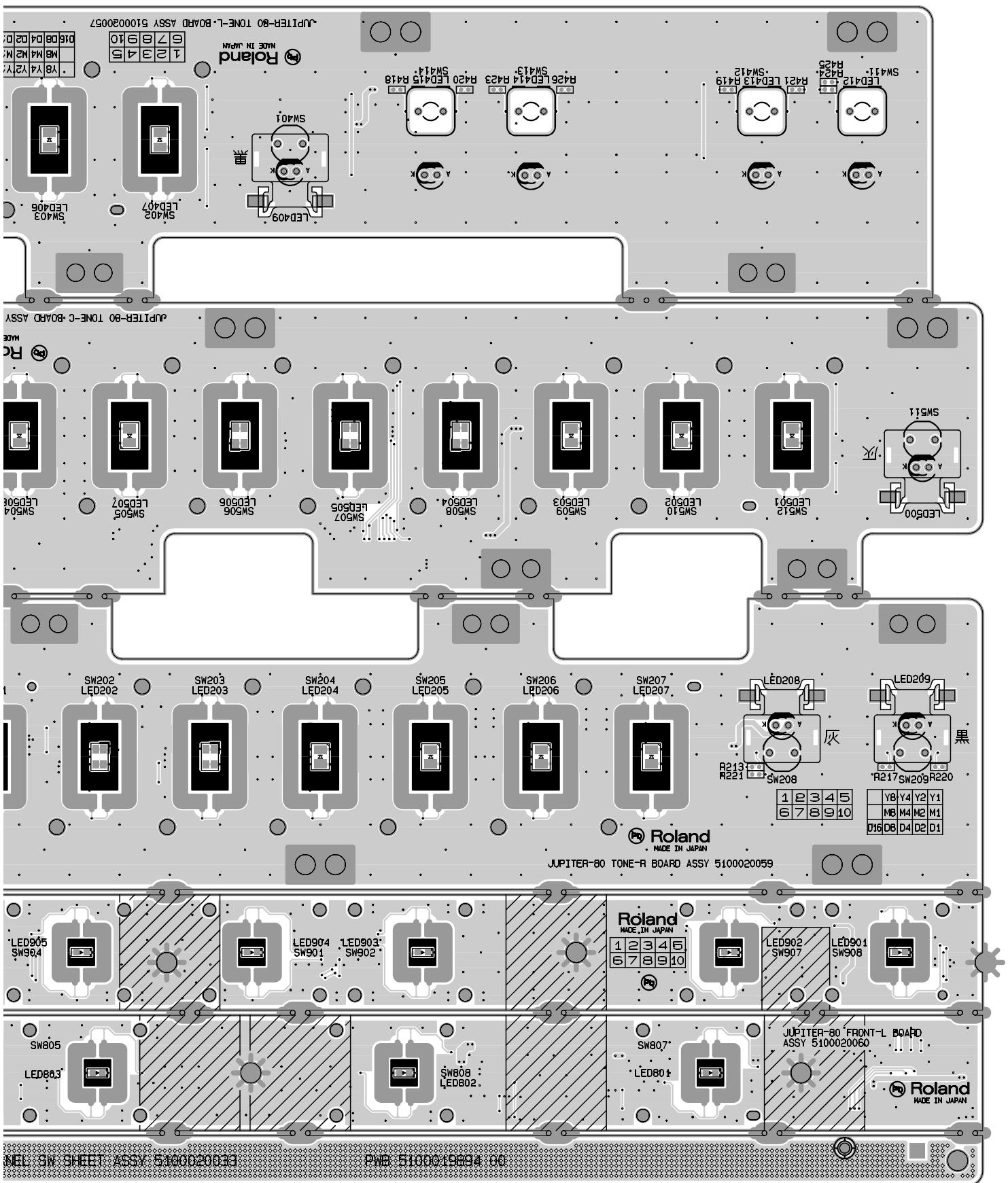


Circuit Diagram (Bender Board)

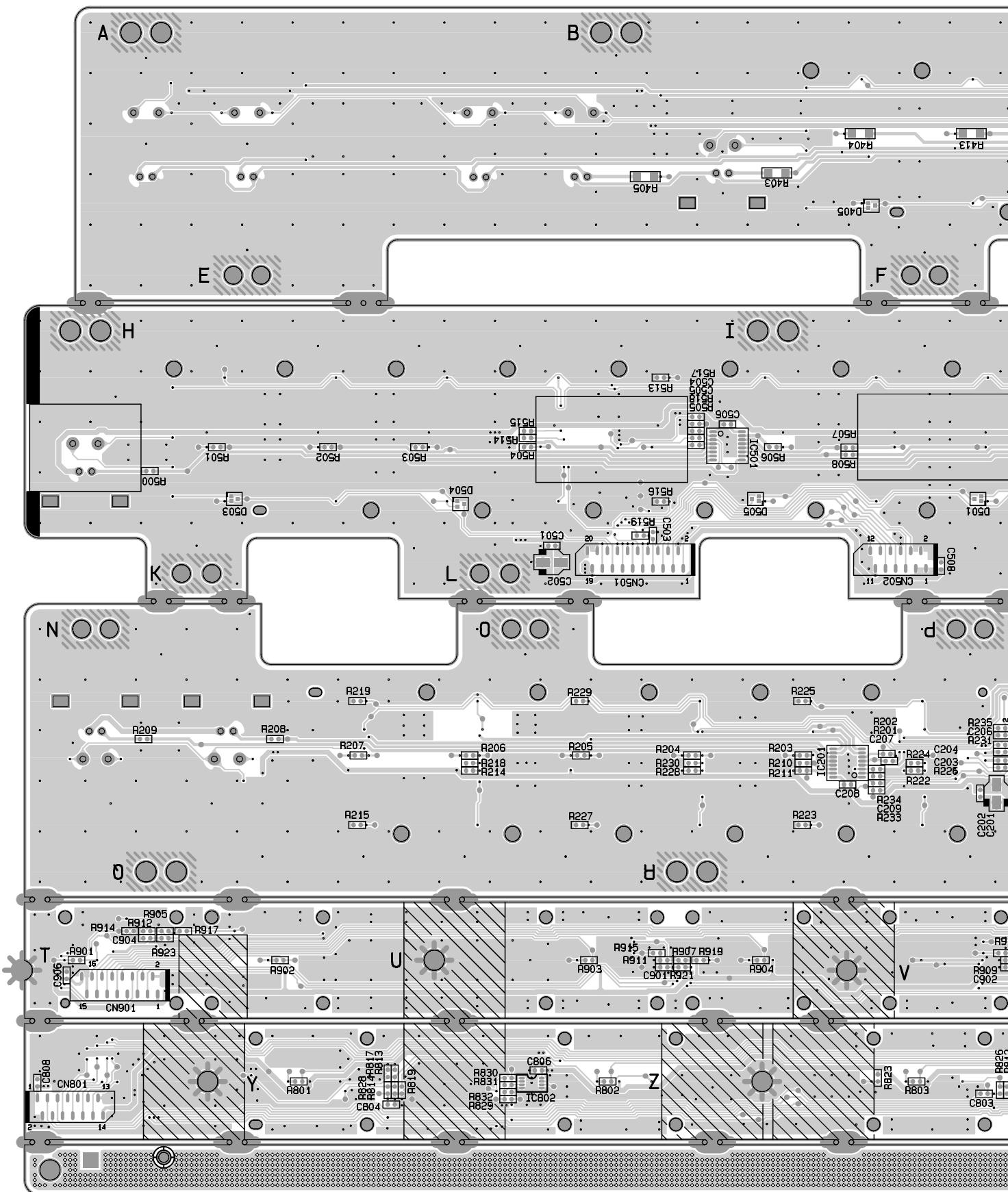


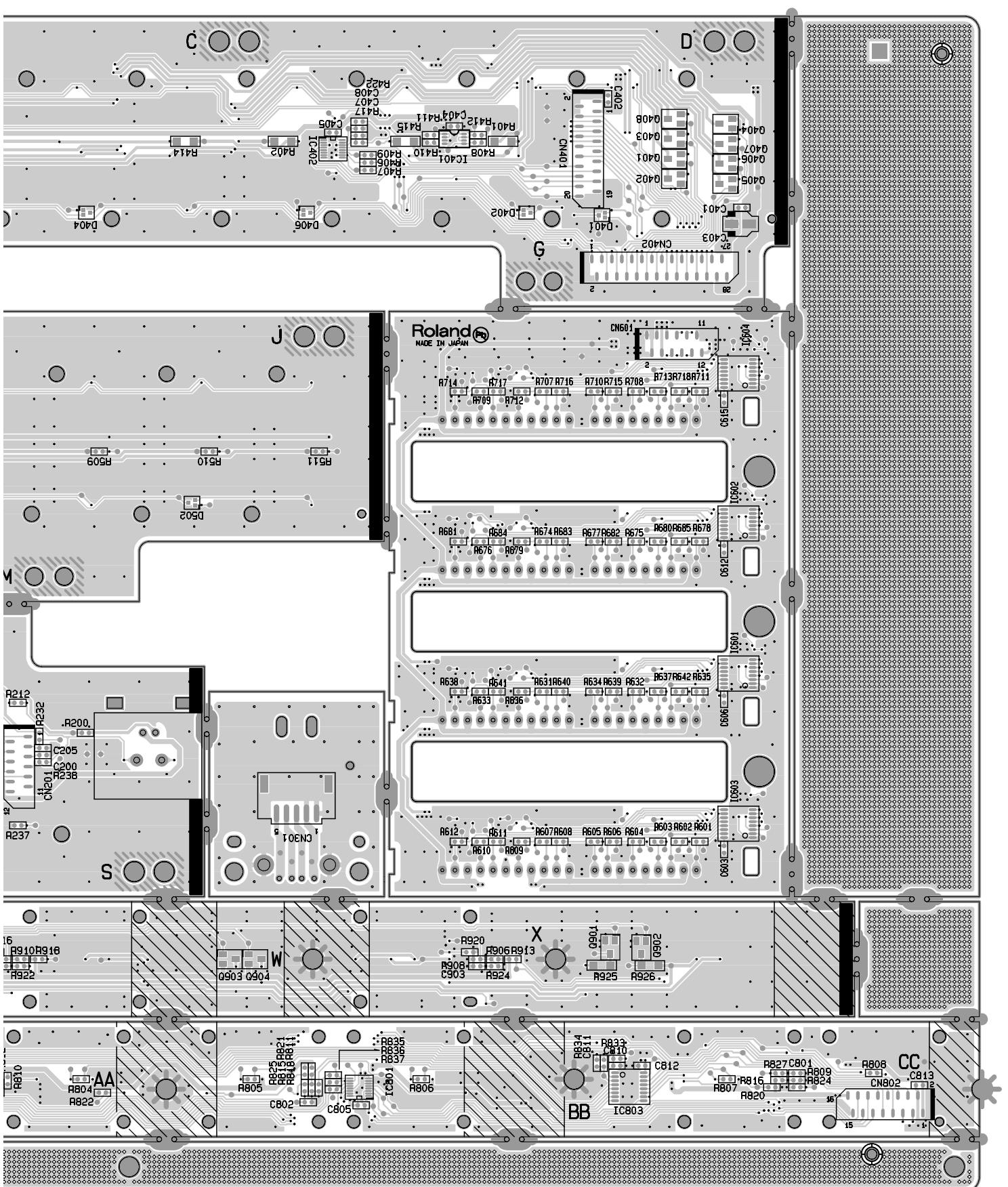
Circuit Board (Tone-L/C/R, Front-L/R, LED, USB Board: 1/2)



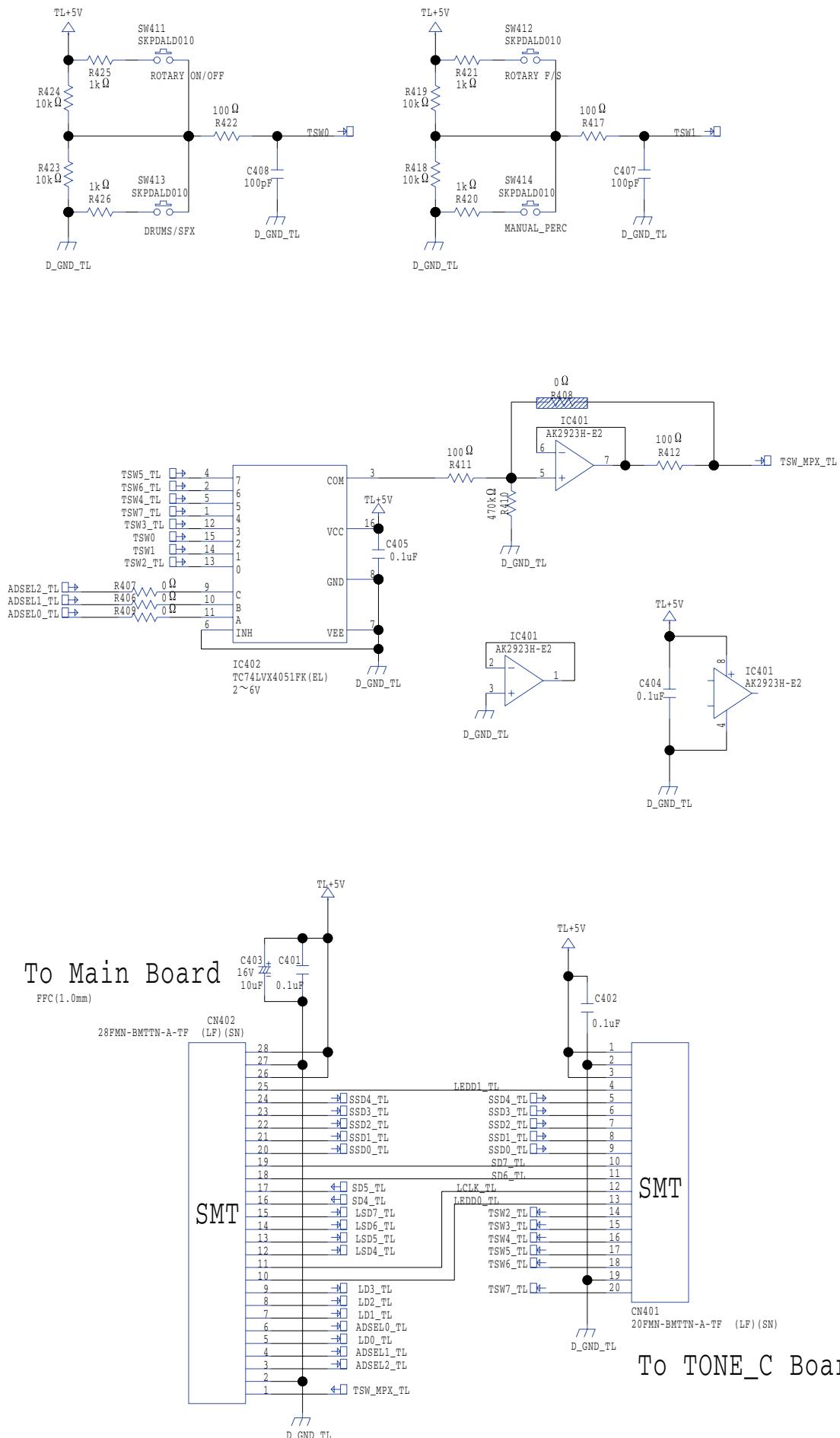


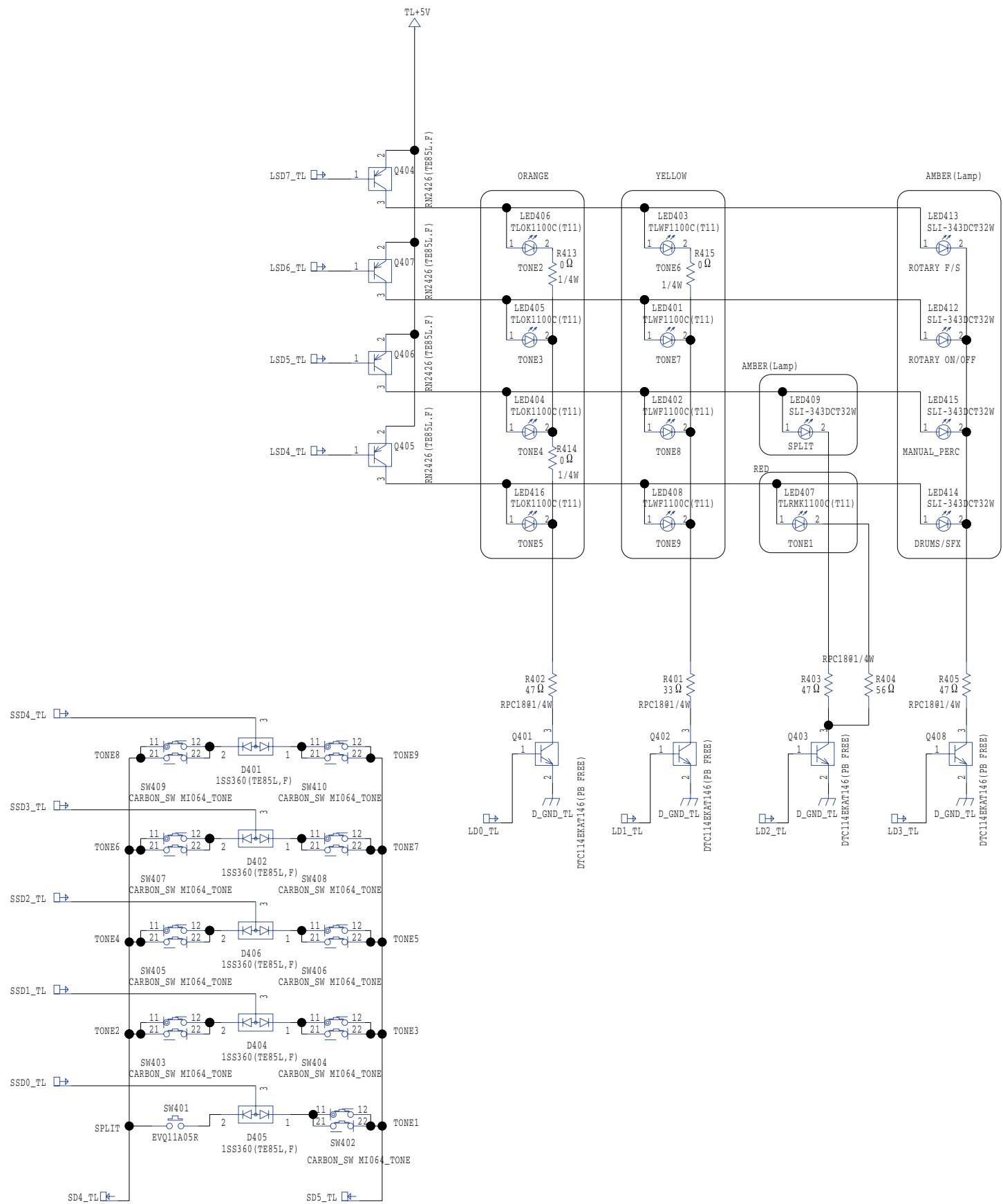
Circuit Board (Tone-L/C/R, Front-L/R, LED, USB Board: 2/2)



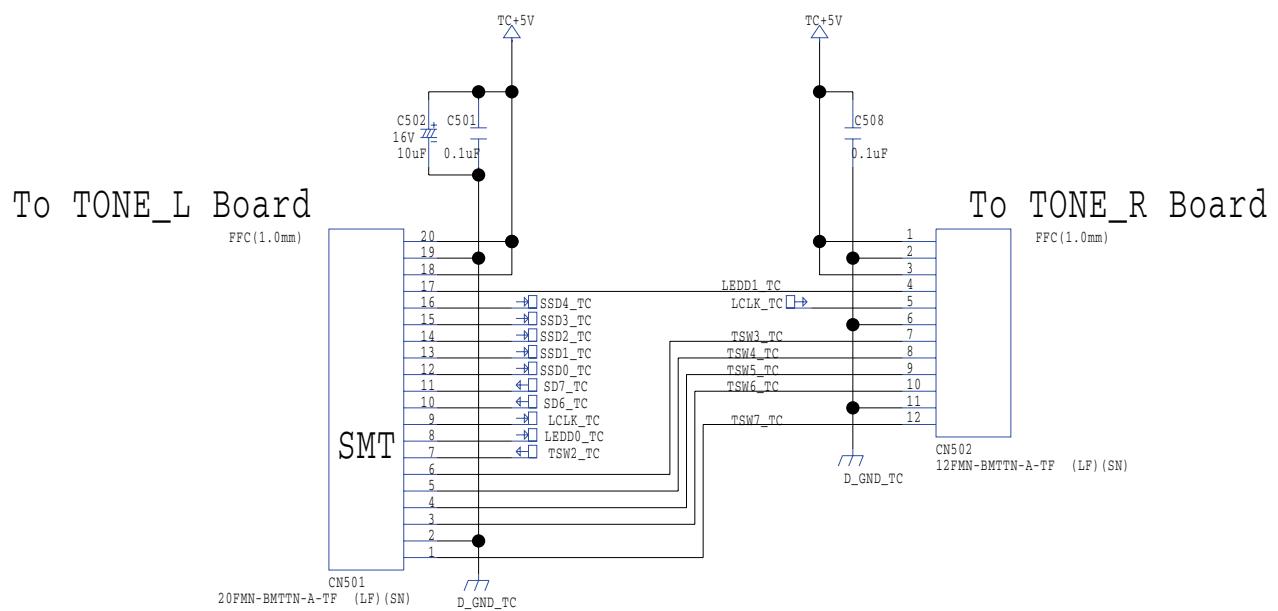
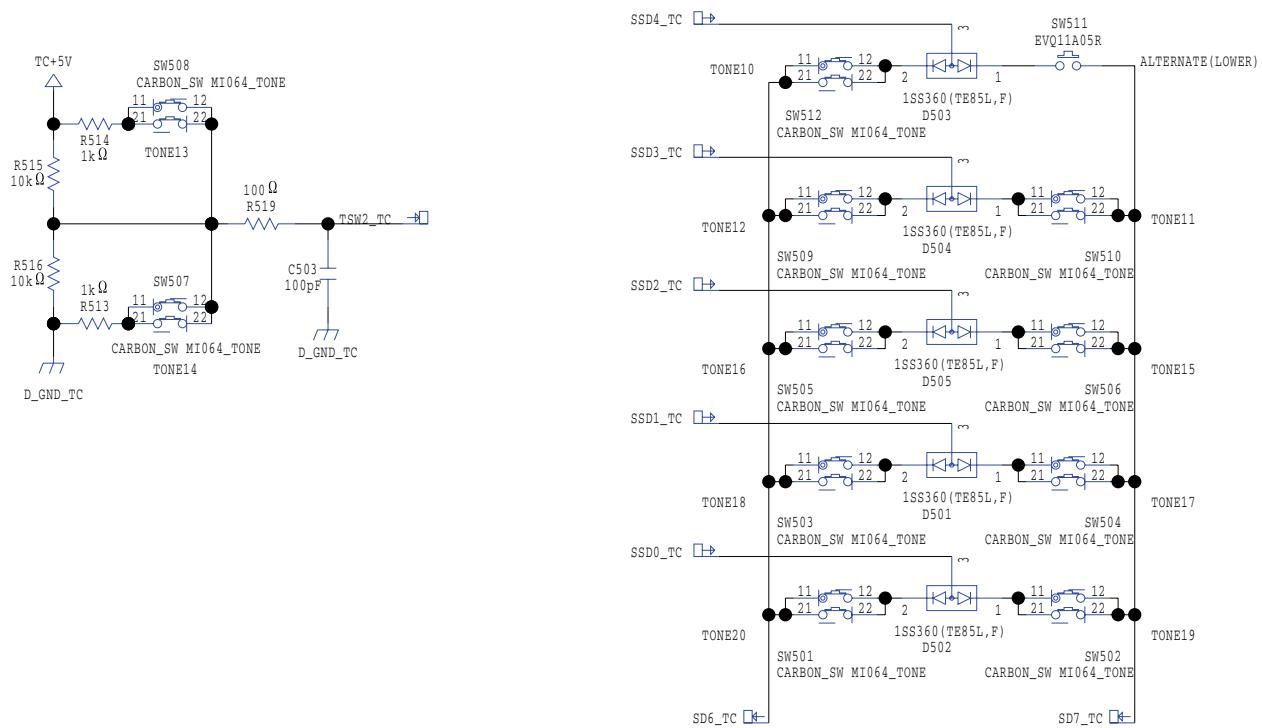


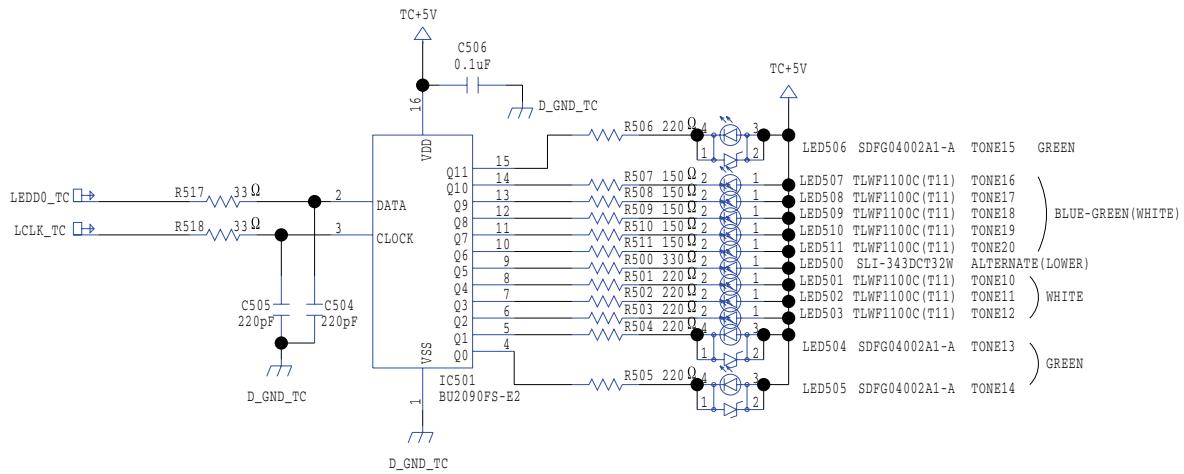
Circuit Diagram (Tone-L Board)



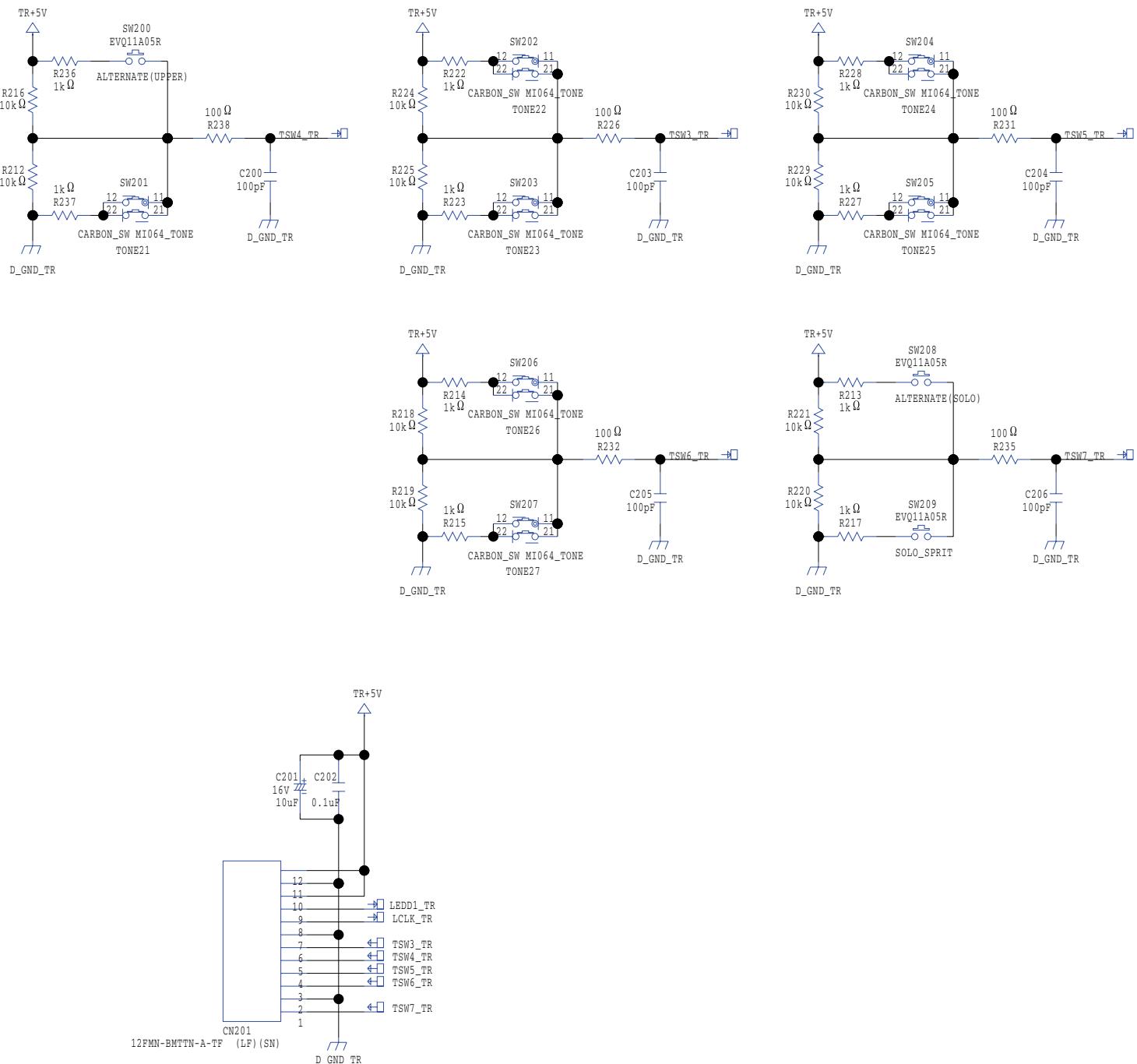


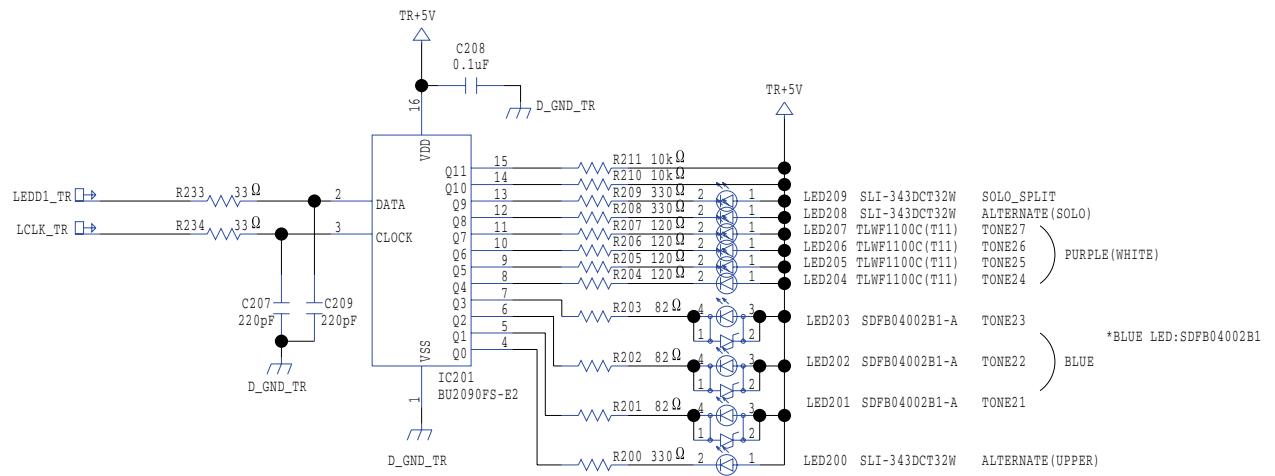
Circuit Diagram (Tone-C Board)





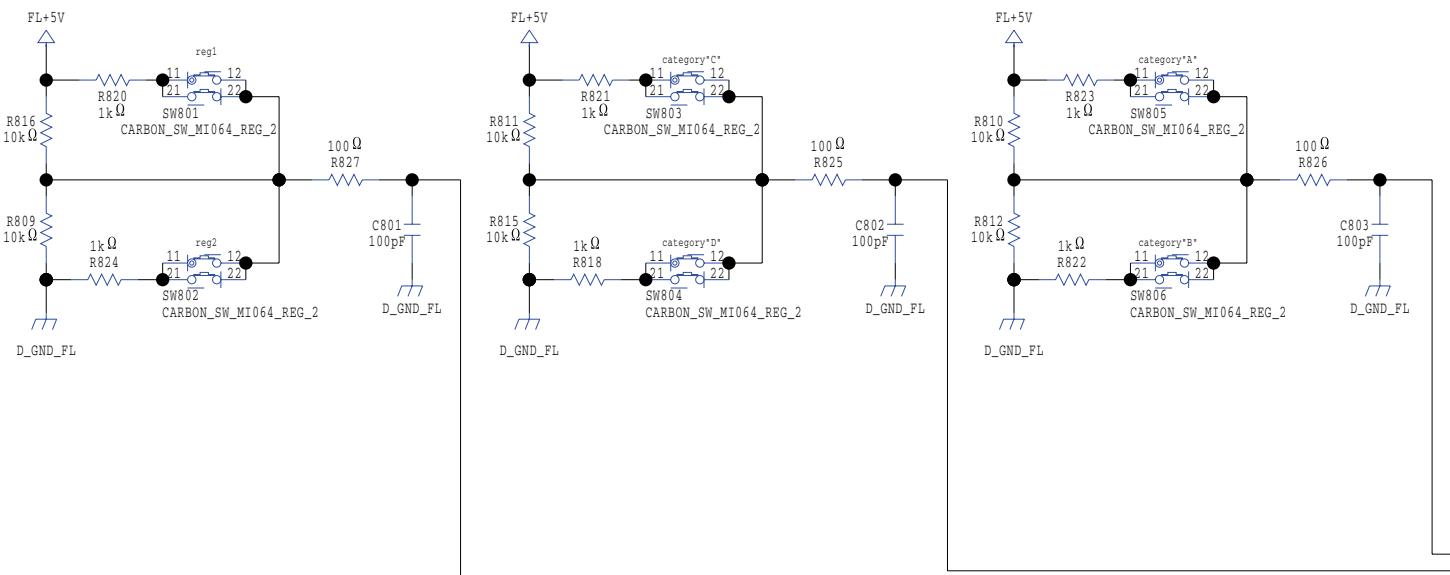
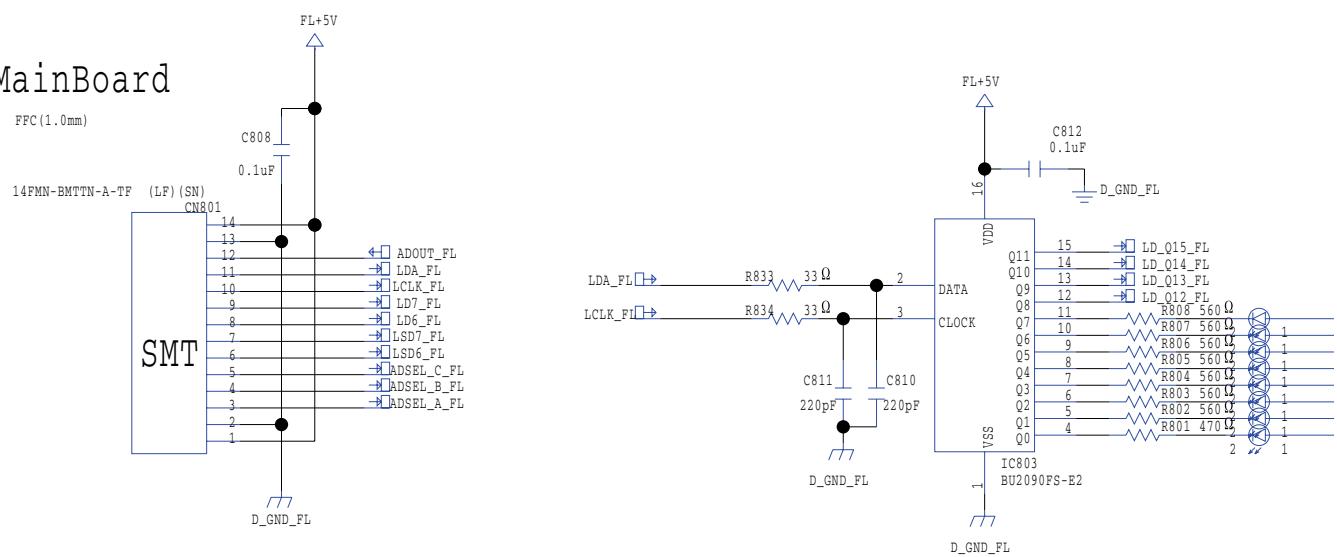
Circuit Diagram (Tone-R Board)

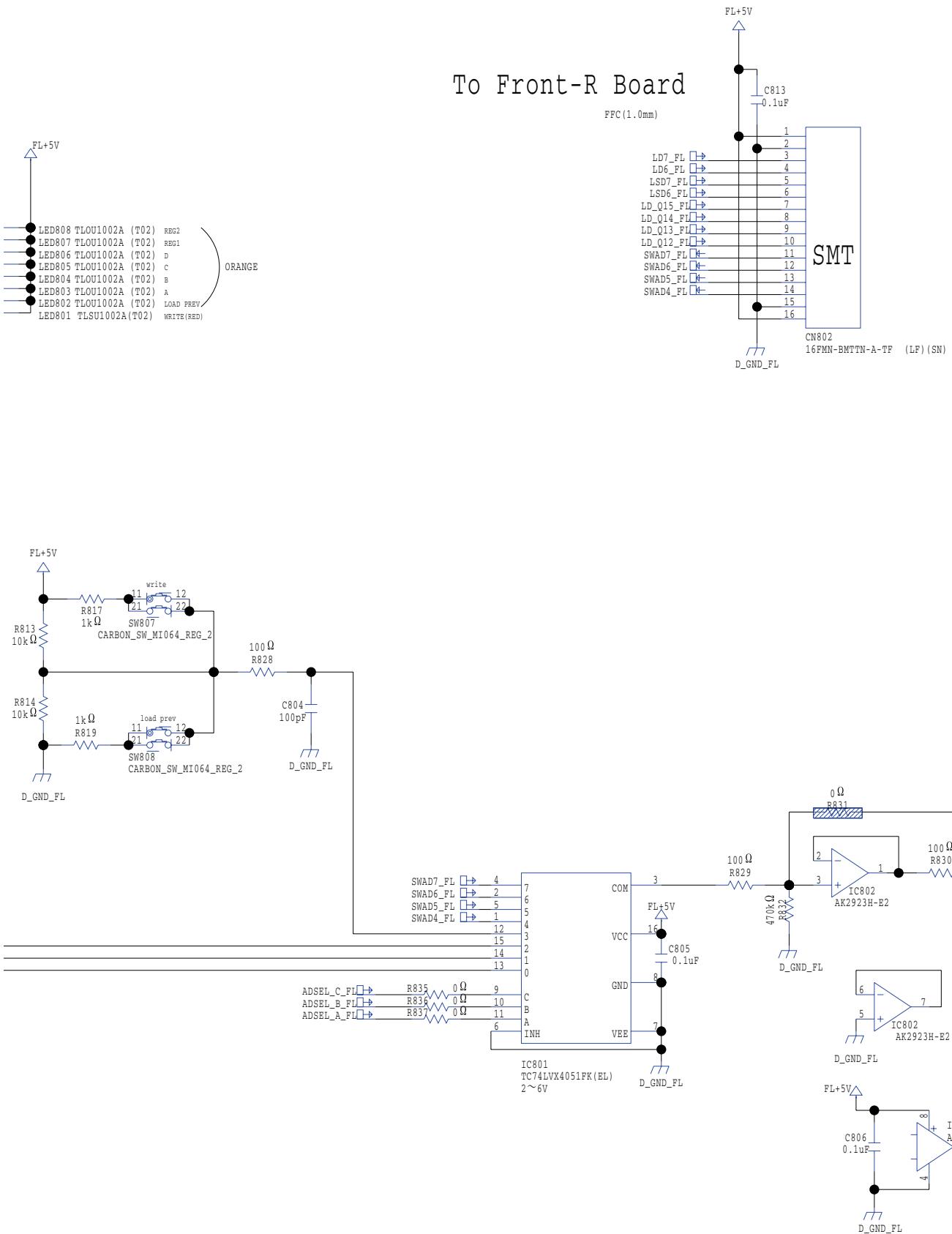




Circuit Diagram (Front-L Board)

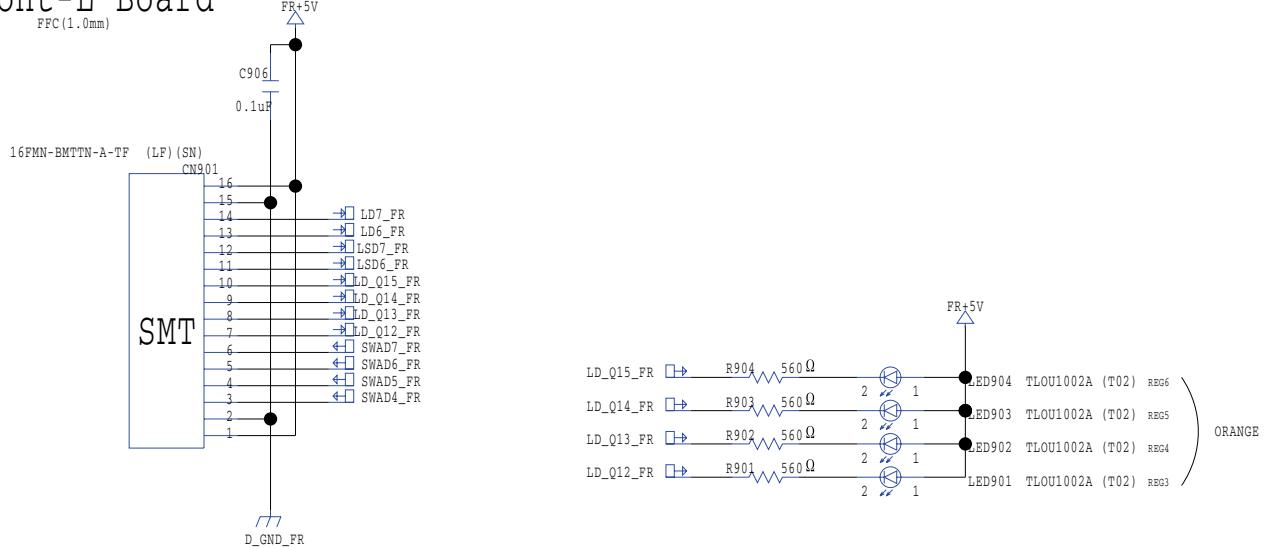
To MainBoard





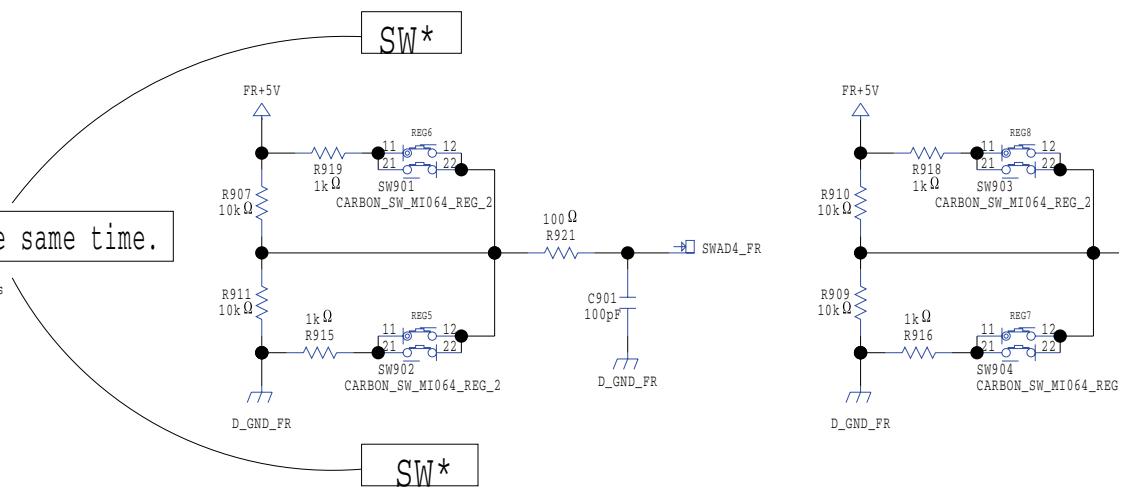
Circuit Diagram (Front-R Board)

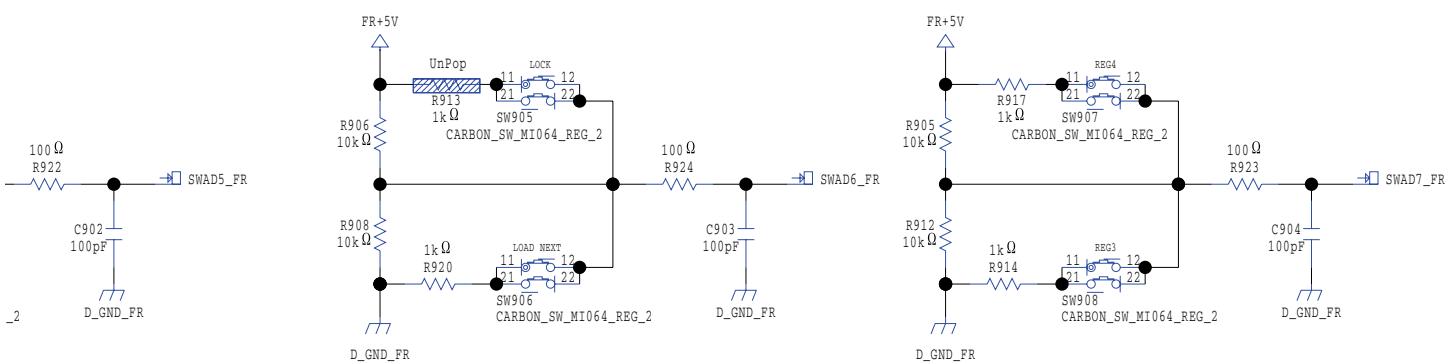
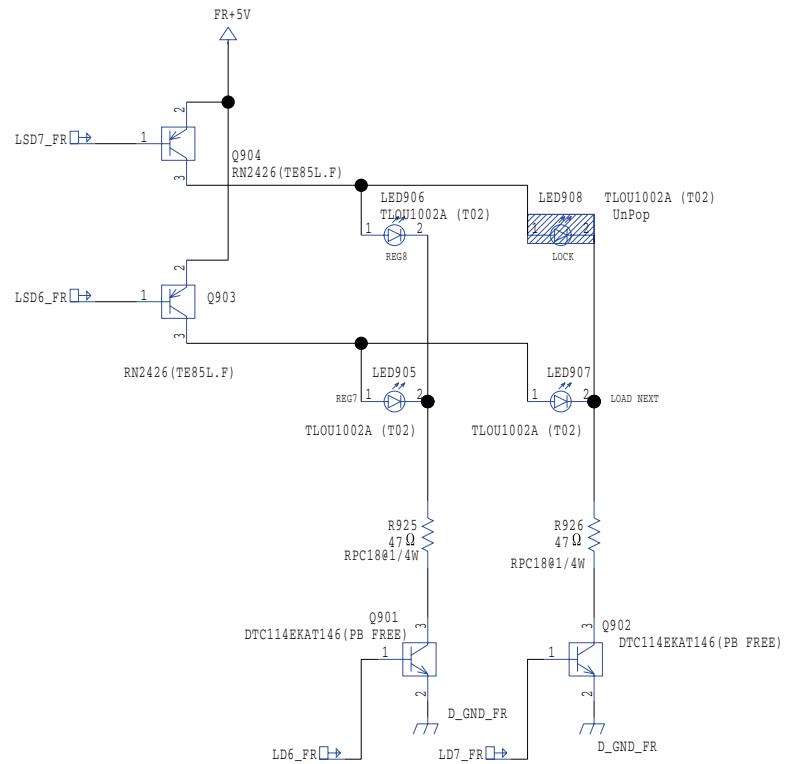
To Front-L Board



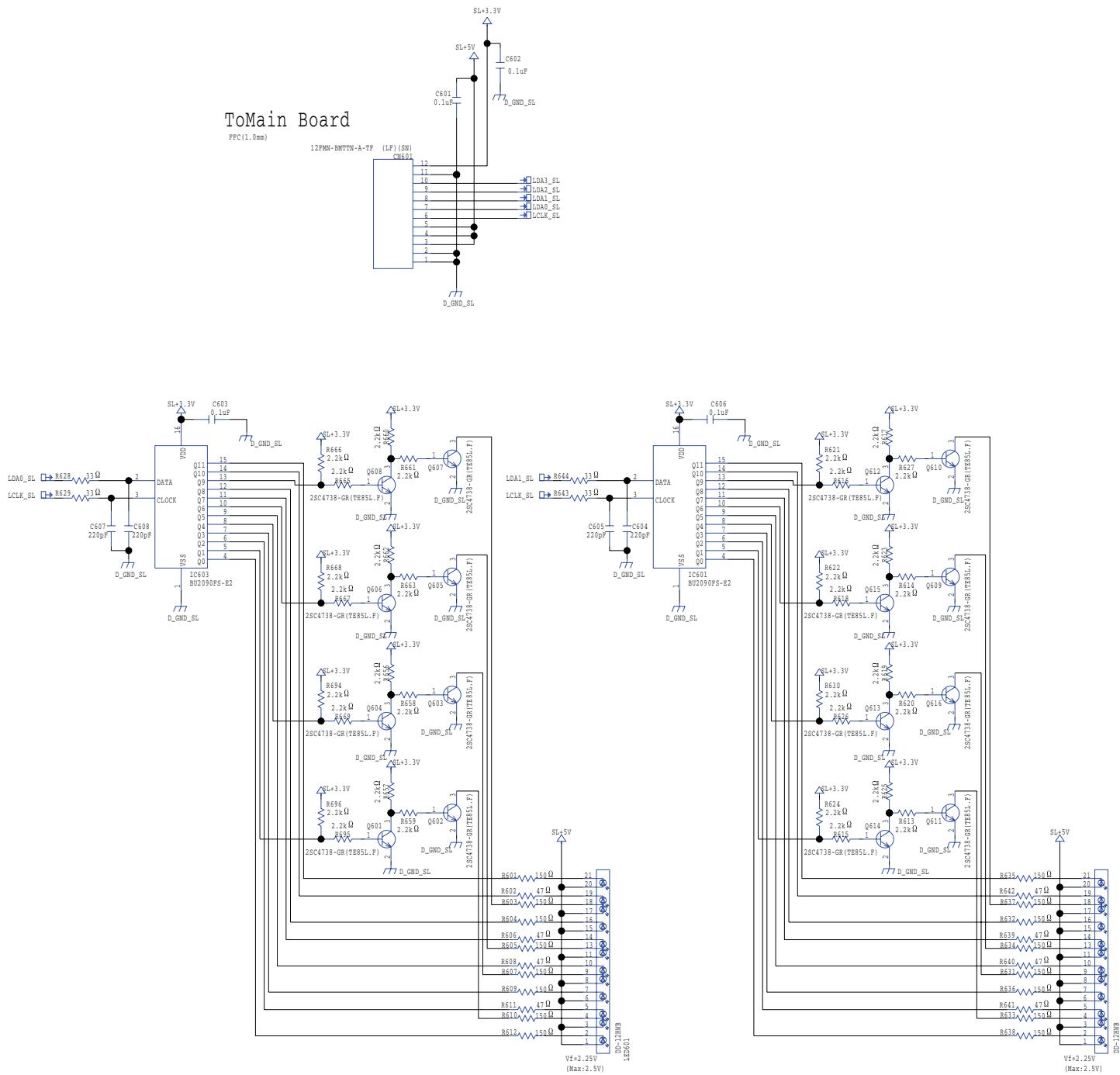
Do not push them at the same time.

* You must not push simultaneously the switches which own AD signals.





Circuit Diagram (LED Board)



Circuit Diagram (USB Board)

